A COMPUSERVE PUBLICATION PRINTED MONTHLY/ONLINE DAILY

ONLINE TODAY

THE COMPUTER COMMU[illegible] MAGAZINE

December, 1986 $2.50

A Day in the Life of the NETWORK NATION

The Story Behind CompuServe's Network

GREAT ESCAPES

Reserve a Retreat in the Sand or on the Slopes

NAMES AND FACES

Database Traces Missing Children

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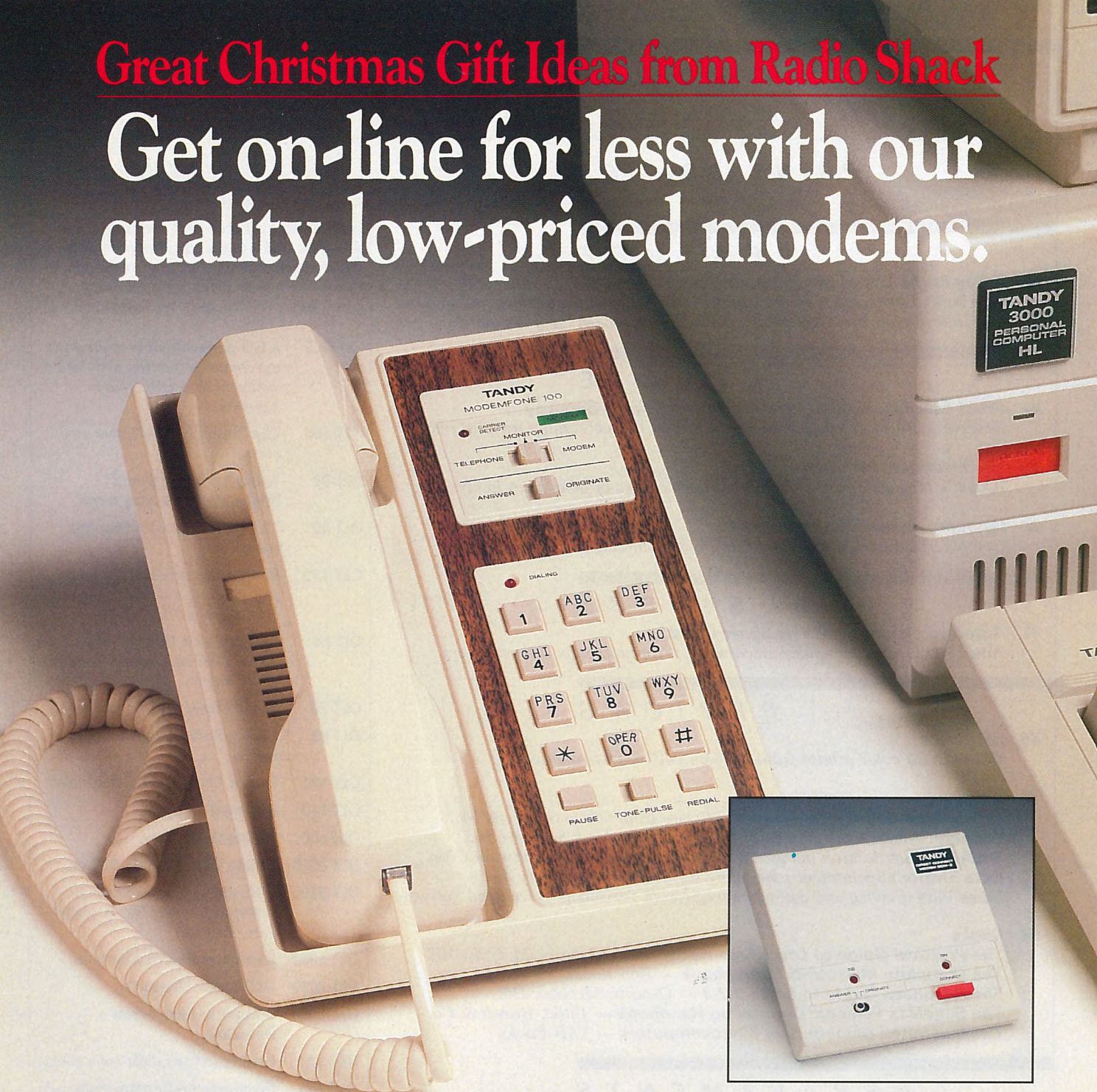

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CONTENTS

PRINT EDITION

FEATURE

12 A Day in the Life of the Network Nation
Step behind the screens of the CompuServe Information Service and find out how information zips through the network to your personal computer.

UPDATE

24 Great Escapes: How to Plan the Perfect Winter Getaway
Reserve a cruise or a weekend on the slopes through online travel services.

28 The Electronic Librarian
IQuest's Magazine ASAP thumbs through stacks of magazines in seconds.

32 Database Traces Missing Children
Computerized portraits capture faces of the missing.

BUSINESS

41 Autodesk Forum Draws Designer Crowd
AutoCAD creates computer-aided support for architects and engineers.

REVIEWS

44 Hardware
Okimate 20 *color printer from Okidata Div. of Oki America Inc.*

48 Software
OfficeWriter and OfficeGraphics *software from Office Solutions Inc.*
Scribble! *Amiga word processor from Micro-Systems Software Inc.*
ScLASERplus *desktop publishing software from Graham Software Corp.*
Date Tickler *appointment scheduling software from Allegory & Co.*
Lines Plus *drawing and editing package from Personally Developed Software*

54 Books
The Practical Guide to Local Area Networks *— Osborne/McGraw-Hill*
The Complete Macintosh Sourcebook *— Info Books*
The Advanced Guide to Lotus 1-2-3 *— Osborne/McGraw-Hill*
The Scholar's Personal Computing Handbook *— Little, Brown & Co.*
The Illustrated Dictionary of Microcomputers *— TAB Books*

DEPARTMENTS

4 *Dear Reader*
7 *Letters*
8 *Monitor*
22 *Beginner's Corner* with David Peyton
26 *Last Minute Shopping at The Mall*
33 *Ask Customer Service*
33 *Gift of Time*
34 *New Product Updates*
35 *Uploads*
36 *CompuServe Subject Index*
43 *Business Briefs*
57 *Industry Watch*
60 *Shopper's Guide*
64 *Online* with Charles Bowen

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ELECTRONIC EDITION

Online Today Electronic Edition provides daily-updated computer and information industry news, coverage of CompuServe services, commentary, computer product reviews and more.

GO OLT	**A GO-page directory** *of the day's top computer industry news and a summary of key OLT page numbers.*
OLT-160	**The Monitor Daily News** *main menu.*
OLT-90	**Today's computer and information industry news.**
OLT-20	**The current week's Monitor news.**
OLT-130	**Behind the Screens.** *Computer and information industry news, rumor and gossip.*
OLT-50	**CompuServe Update** *main menu. Lists all CompuServe news departments.*
OLT-70	**What's New on CompuServe.**
OLT-80	**CompuServe Community News.**
OLT-120	**Forum Conference Schedules.**
OLT-140	**Beginner's Corner.**
OLT-600	**Resident Memory.**
OLT-3500	**Online With Charles Bowen.**
OLT-3700	**Uploads.** *A bi-weekly column summarizing new files in forum data libraries.*
OLT-1000	**Computer Events Calendar.**
OLT-2000	**OLT Special Reports.**
OLT-3000	**Computer Legislation Database.**
OLT-30	**Letters to the Editor** *main menu.*
OLT-200	**Electronic Edition Reviews** *main menu.*
OLT-220	**Hardware Reviews** *main menu.*
OLT-230	**Software Reviews** *main menu.*
OLT-240	**Book Reviews** *main menu.*
OLT-250	**New Product Announcements** *main menu.*
EBB-11	**Instructions** *on use of the Electronic Bounce Back reader service system.*
EBB-160	**Online Today Display ads** *main menu.*
EBB-70	**Shopper's Guide.**

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DEAR READER

If you've ever wondered what happens behind the screens when you log on and venture around on the CompuServe Information Service, you're not alone. Many readers have sent letters asking *Online Today* to write an article explaining how hundreds of local access points tie into mainframe computers and transmit billions of bits of data every day.

Contributing Editor Carole Houze Gerber takes us on an excursion through the network in this month's cover story, "A Day in the Life of the Network Nation," beginning on page 12. You will get an inside view of CompuServe's computer rooms and network control center, and an explanation of how the network operates, allowing subscribers to do such things as online shopping, making airline reservations and chatting in a forum.

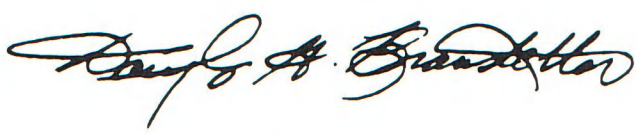
You'll also find out what various subscribers throughout the country were doing on CompuServe on a typical day in October: A professor conversing online in Spanish; a business traveler delayed between New York and Detroit; an early-morning user of the CB Simulator; and *Online Today Electronic Edition*'s Senior Editor Charles Bowen.

If you have questions along the way, you're likely to find the answers in an accompanying article, "Common Questions About the Network," on page 20.

* * *

If you're planning a holiday shopping trip or a winter getaway vacation, you'll find helpful information in the Update section. Instead of getting stuck in shopping mall crowds, you can order flowers, airline tickets, citrus fruit baskets and other gifts and have them delivered to friends and relatives by Christmas. The Electronic Mall offers gift suggestions on page 26.

If you're planning a mid-winter escape to a warm climate, you can make reservations to cruise the Caribbean, venture through Mexico or discover Walt Disney World. Those who would rather take to the slopes can take advantage of an online ski promotion through the end of December. Discounts and other special offers are available to subscribers who make online ski trip reservations for Vermont, Colorado and Utah. Whatever your destination, you'll find tips for planning a winter vacation on page 24.



Douglas G. Branstetter
Editor

ONLINE® TODAY

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This Christmas, give knowledge.

In the spirit of the season, we're making a special offer to families enrolled in the Electronic University Network: Three special "course packages" for three special people on your shopping list. These fun, non-credit courses can be taken right at home, at any time, through a personal computer and modem.

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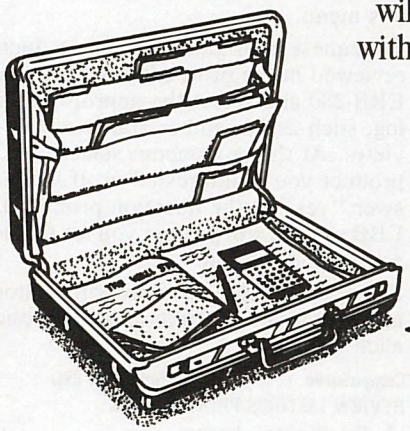

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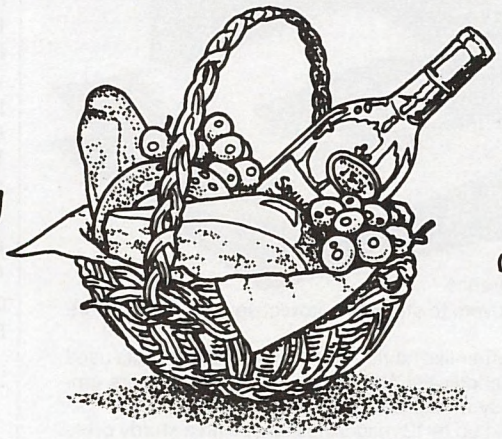

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- California Wine Connoisseur
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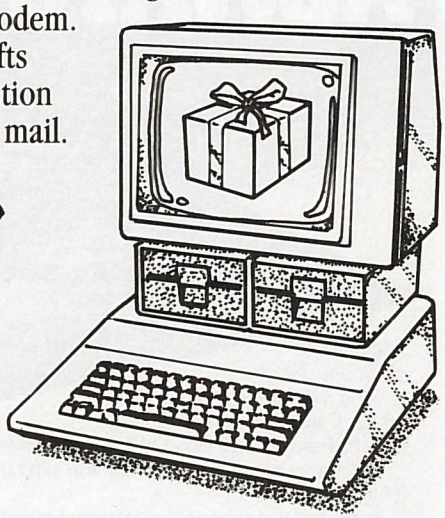

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if calling from California

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GO EBB or circle 4 on the Reader Service Form.

Guidelines to Requesting Information Through EBB

Electronic Bounce Back

Electronic Bounce Back is *Online Today*'s electronic version of the traditional reader inquiry card. To request additional information about products or services described in *Online Today*, simply access CompuServe and type GO EBB at any prompt.

CompuServe Page EBB-1
ONLINE TODAY ADVERTISERS
ELECTRONIC BOUNCE BACK (EBB)

1. EBB Instructions
2. Online Today Display Ads
3. Print Edition Reviews
4. Shopper's Guide Classifieds

Display Ads

GO EBB-160. Inquiries to this section will be followed by a brief description of the *Online Today* ad. To request additional printed information, simply enter your name and address at the prompts. EBB will add your User ID number and electronically forward your request to the appropriate advertiser(s). The names, addresses and User ID numbers will also be forwarded via US Mail at the end of each month.

CompuServe Page EBB-160
ONLINE TODAY ADVERTISERS/EBB

1. Dec. 1986 Advertisers
2. Nov. 1986 Advertisers
3. Oct. 1986 Advertisers

Editorial Articles/Reviews

At the end of each electronic version product review, you'll be asked if you wish to request further information through the Electronic Bounce Back system. A "yes" response will let the system prompt you for your name, address and other information so that your request can be forwarded to the appropriate company. If you respond "no," the system will return you to the previous menu.

To request information about products reviewed in the print edition, go to page EBB-280 and select the appropriate listing, such as December Hardware Reviews. At the next menu, select the product you're interested in. If you answer "yes" at the question prompt, the EBB system will prompt you for the necessary information.

Requests to these sections will be stored and forwarded by traditional mail once each month.

CompuServe Page EBB-280
REVIEW LISTINGS/PRINT EDITION

1. Dec. Hardware Listings
2. Dec. Software Listings
3. Dec. New Product Listings

Shopper's Guide

GO EBB-70. This is *Online Today*'s classified section and is designed to enable readers to easily scan areas of interest.

To request information from Shopper's Guide advertisers, send messages via CompuServe EasyPlex or use traditional methods of communication.

CompuServe Page EBB-70
SHOPPER'S GUIDE

1. About Shopper's Guide
2. Rates and Information
3. Software
4. Services
5. Hardware
6. General

***Note:**
Additional requests during the same session will not require you to re-enter your name and address.

Each issue of *Online Today* is filled with information which CompuServe subscribers benefit from having close at hand for reference.

Use these handsome binders and slip covers to store and protect your back and future editions.

Both styles of case are handcrafted in leather-like fabric, similar to the storage units used by libraries to shelve and preserve their periodicals. And the spines of all cases are embossed with the *Online Today* logo for easy identification on any bookshelf.

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Note: Satisfaction guaranteed by Jesse Jones Box Corp. (since 1943). Allow four to six weeks for delivery. Add $2.50 per unit for orders outside the U.S.

LETTERS

Christmas Lists

I just wanted to thank John Edwards for his "Behind the Screens" column and to comment on his "Christmas Lists" story. Perhaps '386 and Apple IIGS machines indeed are in short supply. Still, to his list of available machines such as Atari 400 and Pet he should have added Coleco's Adam and the Timex-Sinclair 1000. Keep up the good work.

Chris Young
Indianapolis, Ind.

Leading Edge Model D Review

After reading Frank Jones' review of the Leading Edge Model D computer in *Online Today Electronic Edition* (October 1986), I feel compelled to respond.

I am very pleased with my Model D computer. Unfortunately, the negative tone cast in the review is misleading to a prospective buyer. The Model D presents a great alternative to higher priced systems and offers many of their "standard" features.

William J. Hanrahan
Mashpee, Mass.

I read the review of the Leading Edge Model D computer in *Online Today Electronic Edition* and was amazed by the writer's obsession with the machine's keyboard. My wife and I purchased a Model D for our business about six months ago and absolutely love it. Our only complaint is that it seems a little light.

My wife writes press releases at 125-plus words per minute, and she says the Model D's keyboard is one of the best she has used. A keyboard is nothing more than personal taste. Some people think it's the best, while others dislike it. The machine is inexpensive enough that one could justify the purchase of another keyboard if desired.

Tom Rodman
Naperville, Ill.

Reviewer's Response: As stated in the review, the space bar on the Leading Edge keyboard has only one center support. Most keyboards have one support under each side of the space bar. Because the space bar is the single most often-used key on the keyboard, top performance of that key is imperative.

Purchasing another keyboard certainly is an alternative, but the review was based on equipment provided by Leading Edge. Perhaps Leading Edge should consider marketing a better keyboard.

Frank Jones
Online Today

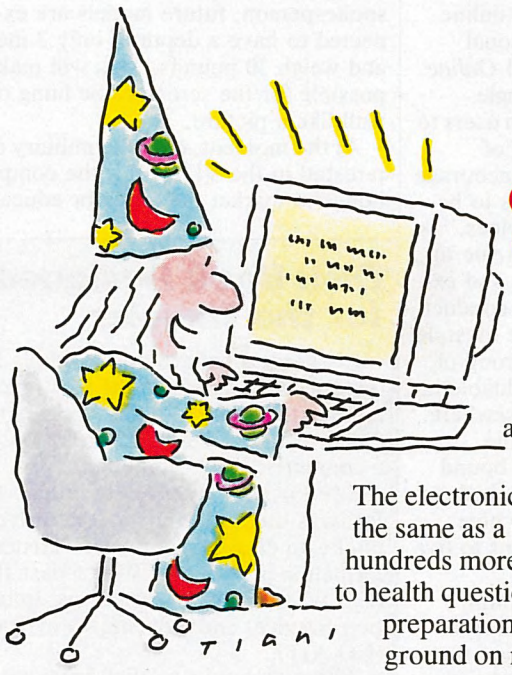
How to Request Product Information

I am having difficulty in entering a request for more information on a product listed in "Industry Watch." Directions on how to do so would be appreciated.

Stephen Schmidt
Granville, Ohio

Editor's Note: See the "Guidelines to Electronic Bounce Back" column on page 6 of this issue.

Encyclopedia Electronica!



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Publisher Examines Online Industry

Online communication must surely be entering a new age — it's developing its own popular press.

The latest such offering, *Online Access Guide*, is a quarterly magazine billed as a "sourcebook" of articles, reviews and listings of the best and newest in online services, databases and related products for the microcomputer/modem user.

Publisher Robert Jordan is enthusiastic about the magazine's prospects, noting it is the first comprehensive, timely journal of its type aimed at the business-user market.

Noting there are about 5,000 online services and databases for personal computers, Jordan says, "Until *Online Access Guide*, there was no single source of information for modem users to describe the depth and breadth of these services. Our goal is to encourage current and future modem users to be aware of and to use online services."

In addition to using the magazine to promote online communication and expand the field, Jordan plans to conduct regular market research into the lifestyle demographics of this upscale group of readers, offering advertisers valuable information they may not find elsewhere. To entice readers to complete the 50-question survey that will be bound into every issue, Jordan has worked out a deal with USRobotics Inc. to give away Courier 2400-baud modems to five lucky participants.

Jordan, 26, realizes the 4 million microcomputer/modem owners represent a $1 billion market for online services. And they are the people advertisers love: educated and affluent with money to spend on telecommunications.

Under the editorial direction of Elias Crim, formerly associate editor of *Futures*, the magazine will feature articles by nationally known writers. Initial circulation of the 112-page publication is 100,000, with individual copies selling for $8.95. A four-issue subscription costs $24.95.

For more information or to order a subscription, contact *Online Access Guide*, Online Access Publishing Group Inc., 53 W. Jackson Blvd., Suite 1750, Chicago, IL 60604; 312/922-9292 or 800/922-9232.

— Cathryn Conroy

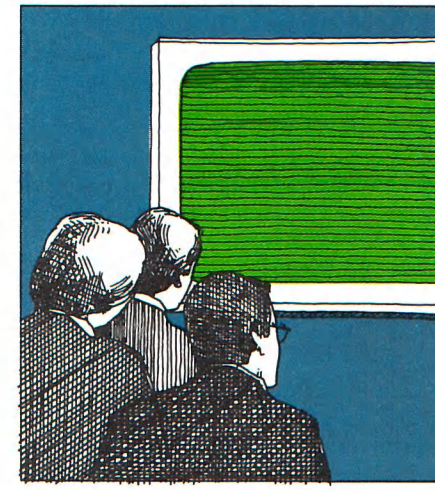
Large-screen VDTs Enter Marketplace

Hate watching Dan Rather on your large-screen television? Well, write him a letter telling him so on your large-screen video display terminal.

Engineers at Lucitron of Northbrook, Ill., have designed a 35-inch VDT that can display computer-generated graphics, television pictures or information from any other electronic source. The screen is only 5 inches deep and requires no projector. Images are displayed on a flat glass plate, offering a wide angle of undistorted visibility and uniform clarity over the whole screen.

According to a Lucitron spokesperson, future models are expected to have a depth of only 3 inches and weigh 30 pounds. This will make it possible for the screen to be hung on a wall like a picture.

At the moment, only the military is interested in the VDTs. But the company hopes to market the units for education and training, computer-aided design and manufacturing, teleconferencing and electronic signs.



Incidentally, don't bother to ask how much the VDT costs. The screen's price is as big as its display.

Disk Book Designed for the Traveler

It's hard to believe that a simple little travel book is contributing to a revolution in publishing, but that appears to be the case. This book is available only on a computer disk.

Lee Foster's West Coast Travel: California is the first in a series of travel books on disk written by Lee Foster, information provider for West Coast Travel (GO WCT on the CompuServe Information Service) and Adventures in Travel (GO AIT).

Although books on disk have not yet caught on to the same degree as paperbacks, Foster is confident they will. "There are so many advantages, and as this technology goes forward you will be able to get a huge amount of information onto a very small disk."

In addition to being able to carry around an entire library in a back pocket, readers of disk books will have search capabilities unlike any printed version, and they can print out only those sections of the book that interest them.

"Typically, a traveler buys a book on Europe and then rips out the section on the country he plans to visit. This destroys the book. With a disk book, the reader can print out any section, mark it up and wear it out and then make a fresh copy anytime," Foster explains.

Disk books also can be interactive. A reader can copy a portion of the book onto another disk and add comments, facts and thoughts, essentially creating a whole new book. "This is a jumping off point for making your own travel book or record," says Foster, who doesn't mind sharing his writing in this way.

Books on disk are easier to update and cheaper to distribute. Instead of the usual year lag time from completion of the work to print publication, disk books can be duplicated and distributed the same day the work is completed.

There are disadvantages. Obviously, the reader must have a computer and that computer's operating system must be compatible with the disk. Plus, the reader must have the inclination to read a book in this manner.

Online databases will contribute to the success of disk books, Foster believes, since people will become used to receiving information through their computers. "There will be a healthy interactive relationship between the two. Each will help create markets for the other in a synergistic way. Disk will triumph over print. The revolution is inevitable," says Foster, although he admits it will not occur soon.

Selling for $19.95, the book is available in MS-DOS and Apple versions from Pinpoint Publishing (800/633-2252, ext. 610) or Books & Maps for the Traveler (415/327-1754).

Kids Interact with Sesame Street Characters

The quality of such Children's Television Workshop programs as "Sesame Street" and "3-2-1 Contact!" is legendary and makes the debut of CTW's electronic bulletin board an exciting prospect.

Operated by Ozzie Alfonso, senior producer and writer of "3-2-1 Contact!" the new BBS is still experimental. Alfonso, an avid CompuServe user, thought a CTW bulletin board would be fun to operate. Although he is enjoying it, he quickly discovered how much work and responsibility goes into being a good systems operator.

"Many of the educationally oriented bulletin board systems are closed," says Alfonso. "I'm a television producer. I like to reach an audience. I thought we would put it up and see what happens. Do people want to talk to Big Bird or receive information produced by CTW?" Alfonso wants the users to shape the direction of the board, which contains sections for the various programs produced by CTW, as well as a conference section for exploring such philosophical issues as how television shapes children's values.

Noting the board is not for children only, Alfonso believes it will be an asset to teachers and parents who want to tie in educational programs of their own with those offered on television by CTW. For instance, the schedule of "3-2-1 Contact!" is posted, as well as a teachers' guide offering ideas on how to use the shows in the classroom.

The bulletin board went online last summer, and in less than a month and with no publicity it had more than 100 regular users.

Still, Alfonso is unsure about its success. "The biggest obstacle I face is that most people just don't know what I am talking about. If they don't have a modem at home, it is hard to show them what it is."

But even with this slight discouragement, he is thrilled with the idea that he and the others at CTW can interact with their audience, something that is unusual for television. "We're used to simply presenting a product and that's it. This is different. We can interact and find out what people want."

To access the CTW bulletin board, call 212/595-4588 (300 and 1200 baud).

Mac Goes Japanese

The Macintosh has gone Japanese.

A Japanese-version Macintosh Plus recently was unveiled by Apple Computer Inc. The $4,000 machine looks, to the untrained eye, like any other Mac. Subtle differences, however, include a special keyboard that contains 50 keys displaying phonetic symbols and a new operating system, Kanji/Talk.

The disk operating system handles three Japanese and English character sets, according to an Apple spokeswoman. A built-in dictionary of 35,000 commonly used Japanese words helps users translate phonetic symbols into text. Third-party dictionaries soon will be available for industry-specific applications, noted the spokeswoman.

And what good is a computer without software? Apple has developed Kanji/Talk versions of its MacPaint, MacDraw and MacProject software packages. Major software developers, including Microsoft, also are working on programs for the machine.

For more information, contact Apple Computer Inc., 20525 Mariani Ave., Cupertino, CA. 95014; 408/996-1010.

— John Edwards

Kids' Newsletter Launched Nationwide

As the computer industry continues its economic roller coaster ride, many computer magazines have fallen off the track.

Still, a new publication geared toward kids has been launched. Called *Kids America Computer News*, the monthly newsletter is a publication of St. Hilda's and St. Hugh's School Computer Club and boasts a nationwide circulation.

Editor Thomas F. Trocco, a biology and anthropology teacher at New York City Catholic school, also hosts a half-hour weekly radio show called "Sam's Computer Games" (Mondays at 7:30 p.m.) on American Public Radio's award-winning "Kids America."

The newsletter was begun to offer children a chance to review software for other children. "A child, after all, takes a different view of things than do adults, and who can better review a program designed for the younger crowd than a member of that crowd?" says Trocco.

In addition to software reviews, features of the newsletter include computer news from around the world, letters from kids and tips on using computers.

Subscriptions are $6 annually. For information, contact Trocco via EasyPlex on CompuServe at 70007,1145 or call 212/666-9871.

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MONITOR

Fair Exchange

Suppose you were in Mexico City and wanted a sampling of the local cuisine. An enchilada, perhaps. How much would it cost in dollars?

Fear not, currency conversion has gone electronic. The X-Changer is an easy-to-use exchange rate calculator that takes the guesswork out of converting dollars into pesos, pesos into pounds and pounds into tugriks (the official monetary unit of the Mongolian People's Republic) or whatever unit you desire.

To work the unit, set X-Changer for your country's exchange rate, enter the amount you wish to convert and the unit will display the correct sum in your own currency. OK, a calculator can do the same thing. But does your calculator come with neck cord, belt clip and keyring attachments? Probably not.

You can obtain X-Changer from the Museum Store at New York's Museum of Modern Art. Send $12 to: Publications Sales and Service, The Museum of Modern Art, 11 W. 53rd St., New York, NY 10019.

Intel Slices Board for IBM PC System

Will a desktop IBM PC soon shrink to the size of a contemporary desktop modem? Chipmaker Intel Corp. thinks so. The Santa Clara, Calif., based company is working on a series of microchips that will help slice the current PC's system board to about 6 inches square.

The trick lies in multiple function chips, each of which can combine the chores performed by up to 50 current chips, according to David House, vice president and general manager of Intel's microcomputer group. By reducing the load on the PC's power supply and cutting manufacturing costs, the new semiconductors also should help to reduce the PC's retail price, notes House. The PC is destined to follow the same size and weight reduction track taken by pocket calculators over a decade ago, he says.

And when will we see the first pint-sized IBM PCs, PC-XTs, PC-ATs and compatibles reach the market? Soon. Intel will be releasing the first of its "M Series" chips next year, and the company has already notified IBM and AT&T of the chips' pending availability, says House.

For more details, contact Intel Corp., 3065 Bowers Ave., Santa Clara, CA 95051; 408/987-8080.

University to Create Chips of the Future

The National Science Foundation has awarded the University of Texas at Arlington a five-year $250,000 grant to establish a research center to help develop computer microchips made of gallium arsenide. Current chips are made of silicon.

Gallium arsenide is a compound semiconductor that is used to build microwave integrated circuits that are far superior to their silicon counterparts. Microchips made of gallium arsenide are faster and use from 10 to 100 times less power than silicon chips. They are used in communications systems, radar instrumentation, military systems and high speed computers. Someday, they also may help manufacturers create more energy-efficient portable computers.

Dr. John Owens, an electrical engineer who will direct the center, said the technology is based on lower performance silicon chips or circuits using individual gallium arsenide transistors. The use of integrated circuitry will enhance performance and lower costs, he said.

The center, called the UTA Industry/University Cooperative Research Center for Advanced Electronic Devices and Systems, is part of an NSF program to promote cooperation in research between universities and industry. The center will be funded by the NSF grant and contributions from industrial sponsors, including Texas Instruments, Honeywell and Rockwell International.

Entrepreneurial Woes

The New York firm of Laventhol and Horwath (212/586-6015) has studied entrepreneurs and cataloged their research into a report, *The Challenges to Entrepreneurs*. Here's a summary:

- Forty-four percent of the entrepreneurs surveyed said they found it difficult to get their employees to work hard.
- Thirteen percent claimed they have trouble keeping up with technology.
- Thirteen percent felt they have difficulty competing against larger companies.
- Eight percent felt that government spends too much time interfering with business.
- Two percent said that foreign competition was a problem.

A Day in the Life of the NETWORK NATION

by Carole Houze Gerber

HUNTINGTON, W. Va., 6:30 a.m. EST — It's a cool, dreary morning in late October in Huntington and a heavy rainfall makes travel difficult — physical travel, that is. But to *Online Today Electronic Edition* Senior Editor Charlie Bowen, warmly ensconced in his home office, the storm's force is irrelevant.

After a quick cup of coffee, Bowen heads for his office — a spartan room equipped with two telephone lines and three computers. He immediately logs onto CompuServe to check InfoPlex for messages from other *Online Today Electronic Edition* staffers and learns that three stories await his attention from Ben Knox in London, J. Scott Orr in Washington, D.C., and Danny Janal in New York.

Bowen then logs into an *OLT* online work area where the stories are filed and downloads them for later editing. Then it's on to the Executive News Service and The Business Wire to monitor, respectively, Associated Press wire stories and corporate press releases related to the computer industry. After checking more databases, Bowen makes a hardcopy of his findings, reads it downstairs with *The Today Show* on for company and then returns to his office to edit the stories online.

At 9 a.m., his work for the first edition of *Online Today Electronic Edition* completed, Bowen uploads his edited copy to Columbus editorial offices for additional editing before putting the first edition online at 10 a.m. Updated editions will be posted again at 2 and 6 p.m.

NEW YORK CITY, 9:15 a.m. EST — Isaac Rubin of Wappingers Falls, N.Y., sits in one of the world's busiest airports and waits. And waits. First an irritating but minor 10-minute holdup, then an appointment-threatening, hour delay play havoc with his carefully planned schedule. Without some quick information, Rubin will have to miss his Detroit meeting and make an unplanned overnight stay.

Rather than running back to the airline ticket counters to queue up with other frantic business travelers trying for a different connection, Rubin calmly pulls today's printout of the Official Airline Guide Electronic Edition from his briefcase. Made this morning before beginning his journey, the OAG printout shows that a flight from a competing airline will get him to the meeting on time. In short order, Rubin purchases his ticket and is airborne to Detroit.

SANTA CLARA, Calif. 12:45 p.m. PST (3:45 p.m. EST) — Psychologist Tracie Moore concludes her counseling session with a 13-year-old boy and rushes out to buy a dress for a dinner date that evening with Steve Fickes. Since her next client is scheduled for 2 p.m., she decides to skip lunch and head for the nearby Town and Country Shopping Center.

Tracie, a calm and purposeful shopper, goes directly to the Emporium department store where she quickly decides on a simple black silk dress on sale for $120. Fortunately, the checkout line is short, and Tracie waits only a few moments before handing the clerk her VISA card.

The clerk runs Tracie's card through a point-of-sale terminal that reads her name and card number from the information coded magnetically on the back. The terminal adds to this the merchant's ID number, the date and the amount of purchase before automatically dialing a CompuServe node using a local access number. One of the node's special POS ports receives the information, recognizes that it's a VISA transaction, and routes the data to VISA's mainframe computers in San Mateo, Calif. There it's determined that the card is not stolen or fraudulent and that

Tracie is under her credit limit.

Twenty seconds later, Tracie is signing the credit slip. Three minutes later, she's out the door. Piece of cake.

HARRISONBURG, Va., 2 p.m. EST — Sunshine breaks through the clouds in Harrisonburg, a college town located in the heart of Virginia's picturesque Shenandoah Valley. Inside James Madison University's Wine Price Building, Howard R. Cohen, an associate professor of foreign languages, has accessed the Foreign Language Education Forum on CompuServe. Cohen is surrounded by 19 undergraduates enrolled in his Business Spanish course. The students, who are mastering Spanish for commercial business purposes, watch intently as Cohen talks real-time in Spanish with another forum member about recent political trends in Latin America.

Before logging on, Cohen set up his software to capture the entire conversation. After 15 minutes of exchanging views online, Cohen logs off and, because some Spanish characters are not transmittable, makes some adjustments to the material he has captured. He then formats it, prints it, runs copies and hands it to the students. Their assignment: translate the conversation into English as quickly as possible.

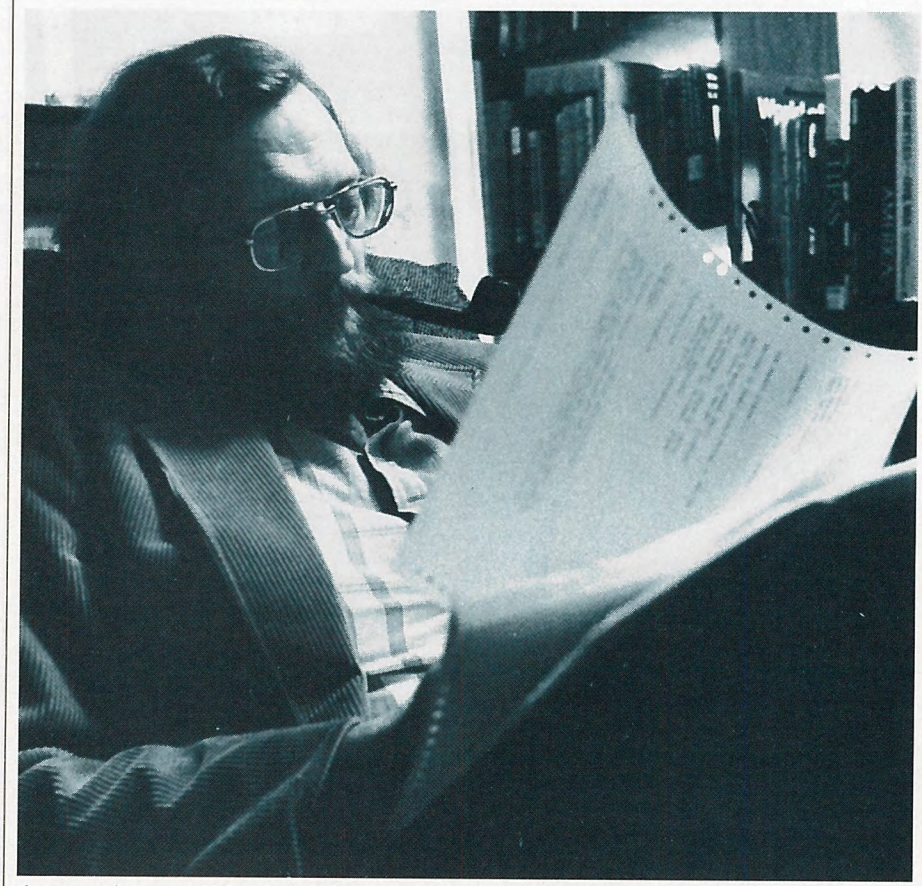
PITTSBURGH, 3:45 p.m. EST — In the third floor building annex of H.J. Heinz headquarters, Linda Eberly, coordinator of manufacturing and bid sales/food service, sits surrounded by a sea of financial information. Each day Linda receives between 10 and 25 requests from sales representatives around the country to provide bids on large quantities of Heinz food products.

Today is especially busy and, as the afternoon wanes, her stack of requests for bid calculations grows. The latest, sent by InfoPlex from the Decatur district office, is an ASAP bid request for a price the sales representative can quote the distributor for 20,000 cases of baby food. Since the client has been a steady one and because she needs a break from figuring a more complicated bid, Linda responds to the request right away.

After examining ingredient costs, distribution costs and other factors, Linda determines a final price and gives the information to a clerk named Terri Potts who sends it over InfoPlex back to the Decatur office. This is where the waiting comes in — it will take up to 21 days for the client to consider all bids and respond to the Heinz representative in Decatur. If the bid is accepted, InfoPlex will be used to simultaneously notify Linda's office, customer service, accounts receivable and every other Heinz employee engaged in the ultimate goal of getting thousands of jars of baby food to Georgia babies.

SEATTLE, 4:30 p.m. PST (7:30 p.m. EST) — Arlene Allegra, a financial planner and accountant with a financial services firm called CIGNA, receives a call from a client seeking quick information. His request is a vague "whatever you've got on IBM," so Allegra rings off with the promise to call back in 15 minutes. She logs onto CompuServe and makes two fast stops: first, to check IBM's high and low prices and the volume of the Dow Jones 30 on the Value Securities database; then to the Value Line II database for a history of IBM, including price/earnings ratios for the past five years and other historical information of interest to investors. She's careful to capture all the data on disk so she can make a printout for her client's file.

Since she's completed her task in eight minutes, she decides to take a quick browse through The Electronic Mall before returning her client's call. She calls in her secretary, Ann Starr, and



HUNTINGTON, W. Va. 6:30 am EST
Bowen culls computer industry items from news wires for morning editions of Online Today.

the two of them explore The Mall together. Allegra notices a sale in the L'Eggs/Hanes Outlet store and orders a dozen pairs of panty hose before logging off and calling her client.

NEW ORLEANS, 9 p.m. CST (8 p.m. EST) — Chris Daldegan accesses the Multiplayer Games Forum from the computer located in his bedroom in the New Orleans suburb of Marrero. By day Chris is a supervisor for Pacific Molasses Company. By night he's Popeye, a strategist and warrior who fights in *SeaWAR* against formidable enemies from around the country.

SEATTLE, 4:30 p.m. PST: *Allegra, Starr switch from financial analysis to finding values at The Electronic Mall*

Popeye checks the game's message board and notes that Submission, a California player, has challenged him to a 9 p.m. game. He hustles directly to the *SeaWAR* war room to chat briefly with Submission before getting down to the serious business of shooting down one another's ships. Submission, who despite her handle is an aggressive player, tells Popeye to cut the chatter and get to the game.

Luck and typing speed play a major role in *SeaWAR* victories: The computer randomly assigns each player between six and 14 ships, and there are no "turns." Instead, players frantically type in moves and the one whose instructions are entered first gets a finger up on the action. The object is simple: to destroy all the enemy's ships as quickly as possible.

Popeye is in luck. He gets 13 ships to Submission's seven, so finishing him off will probably take longer. Submission — the faster typist — commands a battleship to move toward one of his vessels. He moves it out of the way. The military ballet of moves and countermoves continues for about 12 minutes before Popeye wipes out the last of Submission's ships. The game over, they retire to the war room to dissect the action. Within seconds, the winner is challenged by Grey Beard, the game's top-ranked admiral. Popeye hunkers down for a long, action-packed evening.

COLUMBUS, Ohio, 11 p.m. EST — Promptly at 11 p.m. Liz Waite, supervisor for computer operations at CompuServe's Arlington and Dublin facilities, inserts her access card and punches in the code that admits her to the Dublin building. Once inside, she walks to the locked computer operations center and repeats the procedure before speaking to Mike Merullo, the departing second shift operations supervisor who is leaving for the night. After Merullo fills her in on second shift activities, Waite talks with Eric Longberry, the Dublin center's team coordinator working the third shift. Longberry shows her the printed status report on all equipment and cautions her that they are monitoring a potential disk problem on a system. He also tells her that three disk refreshes are in progress to improve performance on the DEC 2060s.

At 12:15 a.m., Waite takes selected backup tapes of the Dublin facility's system activity with her and heads for the Arlington facility five miles away. Her purpose — to make sure that computer operations there also are running smoothly. Waite repeats the same access card procedure, first to enter the building, then the computer room. At Arlington, she learns from that facility's team coordinator, Bob Johnson, that engineers are preparing to take down two DEC KI-10 hosts for preventive maintenance procedures. Early the previous morning, the operation staff had readied the machines for maintenance by redistributing CompuServe Information Service subscribers to other hosts.

Because a technician is absent, Waite pitches in for a couple of hours to help make backup tapes of information stored on the Arlington facility's hosts. At 3:30 a.m., taking some backup tapes, Waite

returns to the Dublin facility where she spends the rest of her shift taking care of all details necessary to keep computer operations humming smoothly through the night.

COLUMBUS, Ohio, 3 a.m. EST — Walt Champlin opens a soda at CompuServe's Network Control Center, surveys his stack of work and pulls out a report left for him by Anita Bradshaw, a customer service representative. Champlin, Network Control's night shift team leader, shares the 11 p.m. to 7 a.m. night shift with two other technicians charged with network maintenance and control. He learns from Bradshaw's report that customers are receiving a "ring/no response" when they try to log onto a Los Angeles node and he sets out to solve the problem.

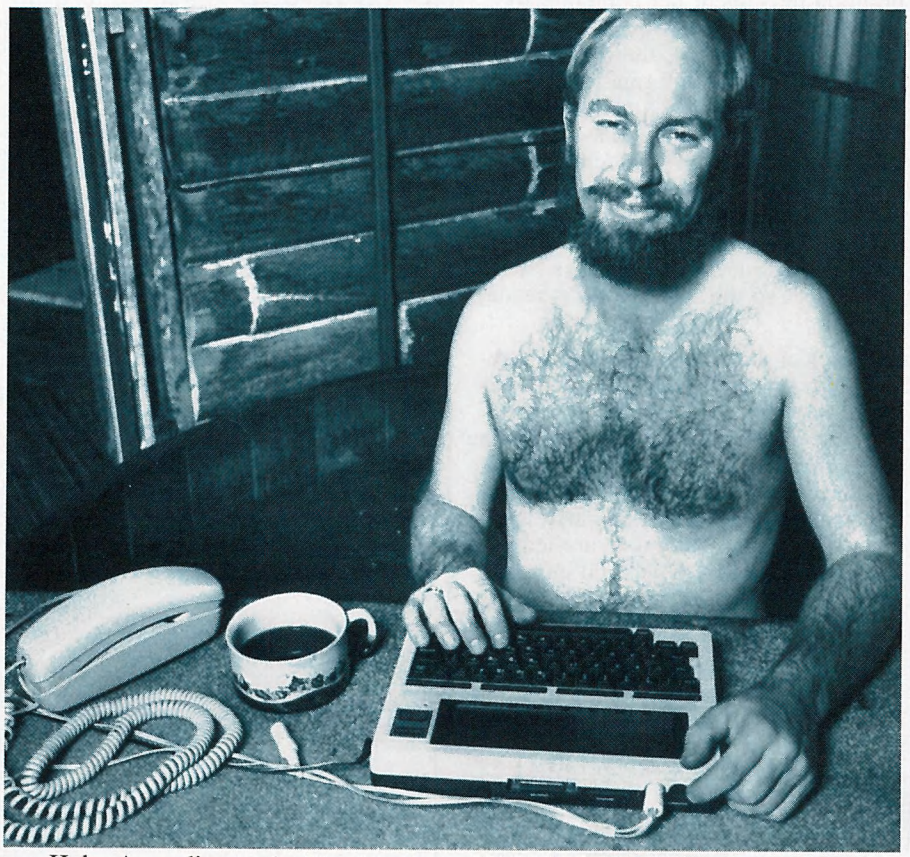
First, he calls the number to verify the situation. Sure enough, there's an incessant ringing but no system logon. Next, he looks into the database of information kept on each micronode in the network to get configuration data on that particular LA micronode. Then Champlin logs into a micronode software program that enables him to evaluate the performance of every port on the micronode.

Champlin soon locates the bad port and "busies out the phone line" so it automatically jumps calls to the next available port. This procedure enables customers to log on and conduct online business as usual. Further investigation shows Champlin the problem is with the hardware, so he makes arrangements to dispatch a field service representative to the LA site. The whole problem-solving process takes Champlin, who's just finishing his soda, a total of 10 minutes.

COLORADO SPRINGS, 5:30 a.m. MST (7:30 a.m. EST) — Snowflakes swirl outside Ron Webster's greenhouse window as he relaxes inside in his hot tub after completing his daily morning run. Webster, whose CB handle is "Ashleigh" and sometimes — but only from the hot tub — "Splashleigh," is a pilot and president of Laser Systems Development Corp. Because his modem is "opto-isolated" — equipped with a laser device that sends signals via light beams — Splashleigh is able to simultaneously hot-tub and hobnob electronically without fear of shocks.

As is his custom, Splashleigh logs onto the CompuServe CB Simulator channel 36 to have coffee with his friends LooLoo, Christopher (with a Control C), Ford and Ferrari. He first exchanges hugs with LooLoo, then banters briefly with Ford and Christopher. Finally, before finishing his coffee, Splashleigh makes plans with Ferrari, who lives in Kansas City, to meet him and his son in Aspen for a ski trip the next day.

After leaving CB, Splashleigh accesses the National Weather Reports and Forecasts to check Aspen's visibility and weather conditions for his small plane. He learns a predicted snowstorm will probably result in low visibility, so he looks at weather conditions in Jackson Hole. According to the Weather database, Jackson Hole is A-OK for small aircraft. A quick CB message back to Ferrari seals the deal, and Splashleigh once again assumes the persona of Ron Webster, corporation president, as he steps from the hot tub to begin his day.



COLORADO SPRINGS, 5:30 a.m. MST: *Webster (known as "Splashleigh" while in his hot tub) hobnobs with CB buddies*

HUNTINGTON, W.Va., 6:30 a.m. EST — Charlie Bowen gazes out his kitchen window while drinking his morning coffee. He notes with satisfaction that it's going to be a fine, sunny day for travel, on foot — for the jogger who trots past his driveway — and, as always, online.

Carole Houze Gerber is a contributing editor of Online Today. *Her CompuServe User ID number is 70007,1215.*

Information in Motion

How CompuServe's Network Transfers Data

If imagining the billions of bits and bytes sent over CompuServe's network each day is too difficult to comprehend, think instead of trains. But before considering how these pieces of data are moved, let's take a quick look at what must happen to make them movable.

First, a subscriber's communications program tells his or her computer to communicate with CompuServe's mainframes in ASCII, the American Standard Code for Information Interchange. Because computers can talk to one another only using numbers, ASCII assigns each letter on your screen a number and sends the numbers over the telephone lines connected to your modem. The software program at the receiving end then translates the numbers back into letters so the information is readable.

Pieces of data from users are assembled into "packets" that then are combined into "blocks" and transmitted over the communications lines tying the network nodes together. Here's where the train comes in. Think of the blocks themselves as boxcars that carry the data. As the blocks of data are loaded, their accuracy is verified and information about the length and destination of the data is attached to each packet.

Then the data blocks are sent over CompuServe's network, which functions like a gigantic web of railroad tracks. These tracks are equipped with hundreds of switching stations that again verify the accuracy of the data and then determine the fastest way to carry the data blocks through the network to their final destinations.

If you can picture this railroad scenario, the idea of data zipping over 9600-baud, specially conditioned telephone lines to and from CompuServe's 40 Digital Equipment Corp. mainframes becomes a little more conceivable.

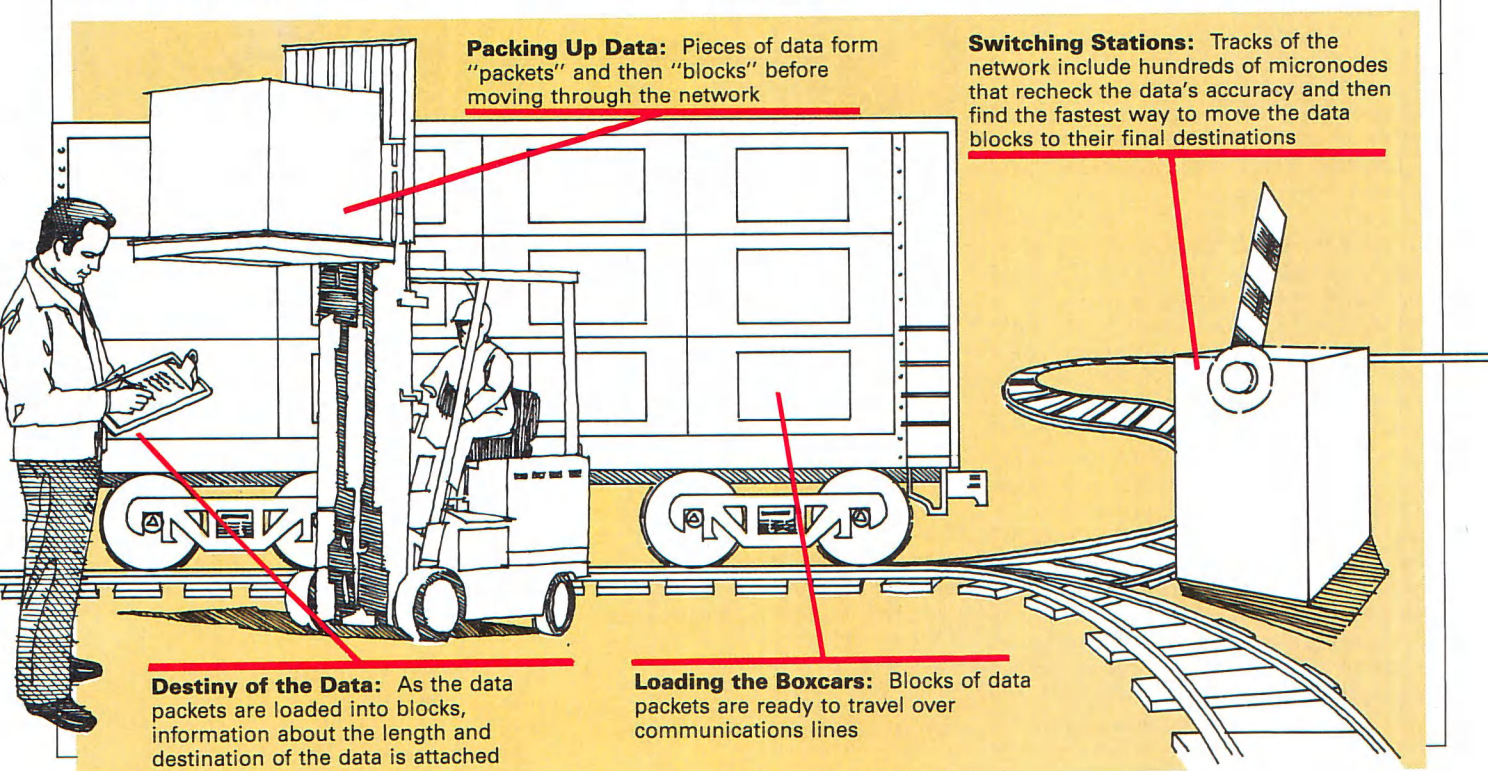
The network's micronodes get an around-the-clock workout from three types of users: consumer subscribers who access CompuServe for personal and business needs such as electronic mail, forums and databases; network clients, such as credit card companies, that use CompuServe's technology as a gateway service linking their host computers with their terminals around the country; and business clients — from restaurants and hotel chains to universities and insurance companies — that use a variety of network services.

Micronodes: The Starting Points

The high-tech data routing process begins when a CompuServe Information Service subscriber or commercial customer logs his or her computer, equipped with a modem and the proper communications software, onto the network via a local telephone call. The telephone call is routed through one of the network's 800 switching stations, called micronodes, that are accessible to everyone with a phone. About 85 percent of the US population can reach the CompuServe network with a local phone call.

Engineered and manufactured at CompuServe's Dublin, Ohio, facility, micronodes are intelligent hardware devices about the size of a small television. Each micronode is a microcomputer that manages the dial-up ports that receive data from CompuServe customers and all other network connections that may be routed through the node. The micronode's computer determines the fastest path for sending the data over communication lines via other micronodes to the host computers in the Columbus, Ohio, suburbs of Arlington and Dublin. Satellite links also are used to make the connections between micronodes and mainframes if the node's computer determines that bouncing the signal up to the satellite and down again is the fastest link.

The network's micronodes get an around-the-clock workout from three


Packing Up Data: Pieces of data form "packets" and then "blocks" before moving through the network
Switching Stations: Tracks of the network include hundreds of micronodes that recheck the data's accuracy and then find the fastest way to move the data blocks to their final destinations
Destiny of the Data: As the data packets are loaded into blocks, information about the length and destination of the data is attached
Loading the Boxcars: Blocks of data packets are ready to travel over communications lines

types of users: consumer subscribers who access CompuServe for personal and business needs such as electronic mail, forums and databases; network clients, such as credit card companies, that use CompuServe's technology as a gateway service linking their host computers with their terminals around the country; and business clients — from restaurants and hotel chains to universities and insurance companies — that use a variety of network services.

Regardless of the customer's specific need, the network's role remains the same: moving data from point A to point B in the fastest, most efficient way possible.

"When a user first initiates a connection, the network node looks at the available communication paths for the fastest way to move through the network to connect with a mainframe," says Gary Sgambellone, manager of network control. "A micronode may determine that a four-link connection through the network to a mainframe is faster than a two-link connection. The node's artificial intelligence enables it to calculate the fastest path based on such factors as link speeds and present usage," says Sgambellone. "All of this happens before the User ID prompt comes up on the screen, showing the connection with the mainframe has been made."

Processing the Data

The next step is the storing, processing and retrieving of customers' data, and this involves the Host Operations staff.

"In 1986 we were about 99.8 percent reliable. Total system reliability is one of the things we constantly work on," says Paul Lambert, director of computer host operations. "Just as our network never goes down because it is a distributed intelligence network, we are hoping someday to have an environment in which end users never know when a mainframe goes down."

With mainframe down-time presently at a tiny two-tenths of one percent, even now customers are rarely affected when there's a glitch in computer operations. This high equipment reliabilty results from a number of factors, including regular hardware and software maintenance; mainframe facilities that are as secure as possible from damage by weather, fire and human beings; and the capability to generate backup power in case of emergency.

A terminal linked to each mainframe shows a running report of usage, including how much memory is being used, the number of users and where they are located at any given time. Lambert says the Host Operations staff keeps the machines about 10 percent idle all the time. A daily usage report helps the operations managers at the Dublin and Arlington computer centers decide whether part of the load should be switched to another mainframe.

Maintaining the System

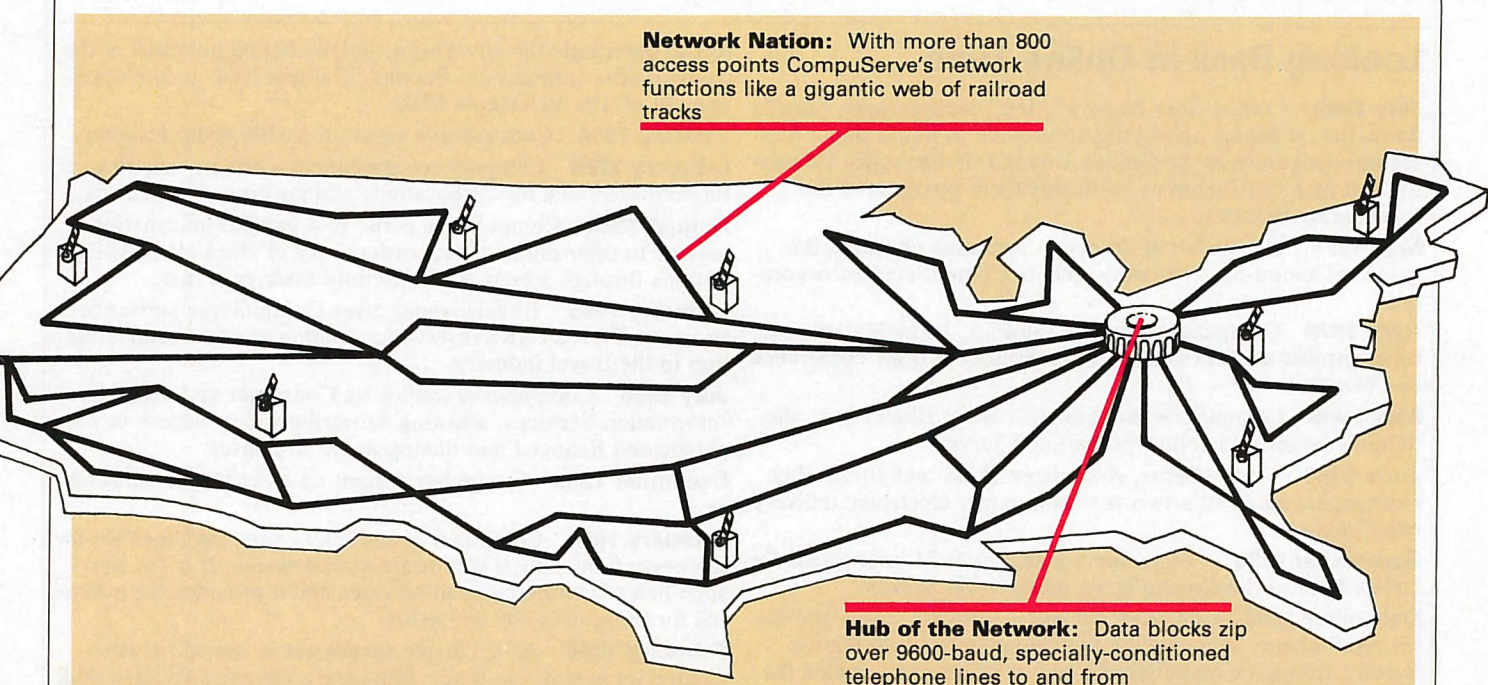
To handle the around-the-clock demands made upon them, the mechanical elements of CompuServe's 17 DEC K1-10 and 23 DEC 2060 mainframes need regular care. The wear on the machines' constantly rotating disk drives, for example, means tiny adjustments — using a screwdriver and an oscilloscope — must be made to ensure the disk drive heads are correctly positioned.

"One of the unique elements of CompuServe is that all maintenance is performed by the in-house Systems Engineering staff, headed by Mike Leskowyak," says Lambert.

Software maintenance also is occasionally required when, for example, a forum or database is being transferred from one mainframe to another or when changes are being made in the product itself. For example, when major changes were made to the forum software last summer, CompuServe's forum product support staff had to take the software down for a short time to change the data structure. Software maintenance usually is done during low-usage times to minimize inconvenience to CompuServe Information Service subscribers, according to Lambert.

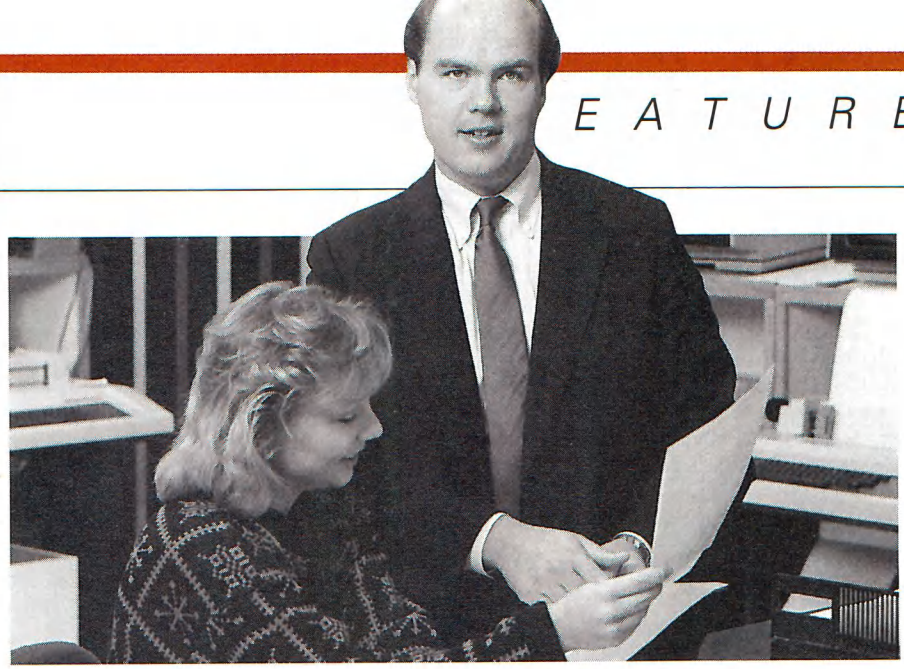
Running the Network

Keeping 800 nodes up and running 24 hours a day, 365 days a year requires effective trouble-shooting by the Network



Network Nation: With more than 800 access points CompuServe's network functions like a gigantic web of railroad tracks

Hub of the Network: Data blocks zip over 9600-baud, specially-conditioned telephone lines to and from CompuServe's mainframe computers



Not much downtime: *Lambert and staff work toward total system reliability.*

Control staff led by Sgambellone. The network and business Customer Service staffs, Network Control technicians and the Field Engineering staff work together to ensure that the network meets customers' demands. A separate CompuServe Information Service Customer Service staff, which handles calls from Information Service subscribers, refers some network communications problems to Network Control.

"Network Control solves problems that range from someone not knowing how to log on to a user not being able to connect because there is a malfunction," says Sgambellone. "Network Control's priority is to provide the user with an alternate method of access to the network. This may involve having the customer call a different number to log on through another network access point."

Using a diagnostic software program developed at CompuServe by the Network Software group, the Network Control technicians can perform a remote checkup from Columbus on any micronode in the field.

"If a micronode becomes isolated from the network due to a communications link failure, we can use remote dial-up capabilities to dial into any micronode and see what's going on," says Sgambellone. "Each micronode can give us a status report showing the condition of its network links, dial-up ports and other factors relevant to figuring out the problem." For example, if one of the communications links on a micronode stops transmitting for one reason or another, the micronode would report a failure — via another network connection — to the Network Control Center. Using the diagnostic program, a Network Control technician could isolate the problem to a micronode, modem or telephone line failure.

If the status report reveals a line problem, Sgambellone's staff works with the appropriate telephone company to solve it. If it's a hardware problem such as a bad modem, a field service engineer would be sent to the site to repair it. One group of these engineers is scattered around the country to handle such minor emergencies. In the meantime, as far as the customer is concerned, the problem is not visible, because the customer's information is automatically routed over another network link.

Finally, every network problem, whether reported by a customer or by a micronode itself, is entered into a database. The information can be searched by date, customer service number, customer name or micronode location. "If a customer calls in years later and asks 'What happened with our equipment on the network five years ago on January 12?'," says Sgambellone, "we could provide an answer."

— CHG

Looking Back in Online Time

July 1969 Compu-Serv Network, Inc., incorporates. Shortly thereafter, it begins operations to provide in-house data processing capabilities to the Golden United Life Insurance Company, and also to develop as an independent business in the timesharing industry.

May 1977 The Board of Directors approves changing the name of Compu-Serv Network, Inc. to CompuServe Incorporated.

April 1979 CompuServe debuts InfoPlex, its highly successful electronic mail service, at the Interface '79 trade conference in Chicago.

May 1980 CompuServe merges with H&R Block, Inc., the nation's largest tax return preparation service.

June 1980 CompuServe, Associated Press and 10 member newspapers agree to a two-year newspaper electronic delivery experiment.

September 1980 CompuServe inaugurates 24-hour access for subscribers to the CompuServe Information Service.

December 1982 Computer retailers, software stores and major retail chains begin selling the CompuServe Information Service through CompuServe's new retail product, called the Starter Kit.

May 1983 CompuServe and L.M. Berry begin developing a test to determine the advertising and marketing potential of the CompuServe Information Service. The test leads to the development of The Electronic Mall.

January 1984 CompuServe signs up its 100,000th member.

February 1984 CompuServe announces a private videotex information service for corporations and government agencies.

August 1984 CompuServe is the first general information service to offer online direct order entry of stocks, bonds and options through a New York discount brokerage firm.

February 1985 Travelshopper gives CompuServe subscribers access to TWA's PARS reservation system, the first such affiliation in the travel industry.

July 1985 CompuServe unifies its Consumer and Executive Information Services, allowing subscribers easy access to sophisticated financial and demographic databases.

December 1985 CompuServe signs up its 250,000th subscriber.

February 1986 CompuServe and MCI Corp. announce the interconnection of their electronic mail services. It is the first such link of competing mail services and it provides the potential for more than 500,000 users.

February 1986 An exclusive agreement is signed between CompuServe and two major Japanese companies (Fujitsu and Nissho Iwai) to offer the CompuServe Information Service and CompuServe's associated videotex technology in Japan.

With the introduction of the ST™ computers comes a new kind of computer language:

PRAISE.

"The most advanced, most powerful microcomputer your money can buy."
—Creative Computing

"The best hardware value of the year."
—Infoworld

"We have spent the last three months evaluating the Atari and have come to the conclusion that it can't be beat as a low-cost telecommunications terminal, drafting workstation, or for quick graphics visualization." *—Microtimes*

"We are most impressed with the clarity of the graphics, with the speed of the disk I/O (input/output), and with the ST's value." ***—Byte Magazine***

"With the impressive ST, Atari has delivered on its promise of power without the price." *—Family Computing*

"Faster and with better graphics capabilities than an IBM®/AT™, it could be a great vehicle for low-cost networks, desktop publishing and visual database management software." ***—Microtimes***

"All of the displays are clear, sharp, readable, and flicker free. We were particularly impressed by the clarity of the high-resolution monochrome."
—Byte Magazine

"The ST's readily apparent strong point is speed. Compared to the Macintosh™, working with the ST is extraordinary."
—John Dvorak, San Francisco Examiner

"Since the pinouts are standard, it is also possible for various software packages to support an even wider range of output devices—even faster printers and high-end plotters." ***—Microtimes***

"The ST is noticeably faster than the Macintosh, not only because of the faster clock rate but because it has a faster disk drive." *—Personal Computing*

"The ST is an amazing bargain, much more of a computer 'for the rest of us' than Mac ever was." ***—Byte Magazine***

"From here on you had better think of Atari as a major player in the computer game."
—Jerry Pournelle, Infoworld

The 520ST™ with 512K of memory is under $800. The 1040ST™ with a full megabyte is under $1,000. No wonder the experts are impressed.

To experience the ST excitement for yourself, see your Atari dealer. For the one nearest you, call 1 800 443 8020. 9:00 AM–5:00 PM Monday–Friday Pacific Time.

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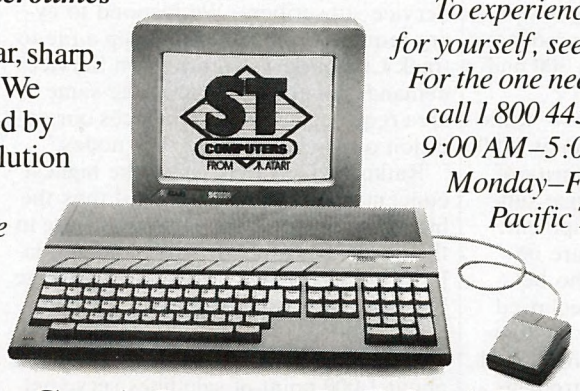

Technology So Advanced, It's Affordable.

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Charting network growth: *Rutkowski (center) staff evaluate node requests*

Node Installations Expand Network

After all the talk of faster modems, more micronodes and bigger mainframes is tallied, sifted and analyzed, the underlying question remains constant: What does the customer need? Determining customers' needs and then meeting them can be a tricky business — move too fast and the demand must play catch-up. Move too slowly and the technology must play catch-up.

CompuServe's response to market analysts' predictions about the change from 300 to 1200-baud modems is a good example of the balancing act required for selecting sound business strategies, according to Sandy Trevor, executive vice president of computer resources. "In 1980, two-thirds of our network traffic was 300 baud or less," he remarks. "Yet, many industry analysts were predicting that 1200-baud modems soon would be available cheaply and 300-baud modems would be obsolete. We felt, on the other hand, that 1200-baud modem prices would not drop as low or as rapidly as experts predicted. Our strategy was to buy modems for the network to handle both 300 and 1200 baud."

The strategy was a good one — while most commercial customers run at 1200 baud, Trevor says the vast majority of CompuServe Information Service subscribers still use 300-baud equipment. Now that 2400-baud modems are becoming available, Trevor — who believes 2400 baud soon will be eclipsed by even higher speeds — says customers' needs still will be the major consideration in deciding when to introduce faster modems. "We've found one of the best ways to achieve the right balance between technology and demand is to stay in touch with our customers and take what the media tells us with an appropriate grain of salt."

Meanwhile, Vickie Rutkowski, manager of network operations administration, and her staff work to match micronode expansion to customer demand.

Recent agreements with phone companies in Connecticut, New Jersey, Pennsylvania and Washington, D.C., will make access via a local phone call available statewide in Connecticut and in the areas in and around Newark, Pittsburgh and Washington, D.C. In these locations CompuServe will interconnect with the phone companies' packet switch networks. "As with our other gateways, CompuServe will surcharge users for this type of access to cover the cost of providing it," says Rutkowski.

Decisions on where to place new nodes are based primarily on demand from commercial and network customers, especially those requiring point-of-sale access, according to Rutkowski. However, she adds, "We also consider interest from CompuServe Information Service subscribers. We respond to every request we receive and keep a file to track CompuServe Information Service demand. As more people in the same area request access, it influences our decision on where to place new nodes."

Rutkowski says presently the highest concentrations of usage — and thus the highest concentrations of nodes — are in the northeast, on both coasts and in major cities nationwide. Historically, usage has been lowest in small- and medium-sized cities of the southern states.

More than 3,500 local dial-up lines and about 1,000 point-of-sale lines serve network customers.

— CHG

Common Questions About the Network

If you've had a problem logging onto the network, chances are the problem is at your end of the system. Perhaps you've neglected to follow precise procedures when accessing. Or maybe your computer's parameters are not set properly. Sometimes, of course, the problem is at CompuServe's end — a faulty node, for example. Or a phone line may be down or too filled with static to carry signals.

Regardless of the problem, help is as close as a phone call, either to a customer service representative or to the newly expanded Customer Service Question & Answer Database on the CompuServe Information Service. To talk with a representative, call 800/848-8990 between 8 a.m. and midnight EST. On weekends, representatives are on duty from 2 p.m. until midnight. In Ohio, call 614/457-8650.

To access the Q&A database at any time, type GO QUESTIONS at any prompt on the CompuServe Information Service. The database includes step-by-step instructions for using online services and information, in an easy-to-follow question and answer format. Topics include log-on problems and procedures, billing, EasyPlex, forums, the Executive Option, the Online Ordering area, CB Simulator, market quotes, personal file areas and personal menus.

Below is a sampling, compiled by Customer Service intern Matthew Burns, of common problems encountered by CompuServe subscribers and customer service representatives' recommendations for solving them.

Q: Although I heard the high-pitched carrier tone, I failed to get a connection when I logged onto CompuServe. What's wrong?

A: If nothing appears on your screen after entering a CONTROL-C, try the following:

- Check to see that you're dialing a CompuServe network access number. Each supplemental network has its own log-on procedure. Only CompuServe's network uses CONTROL-C in the log-on procedure.
- Check to see that your modem is hooked up correctly and that all connections are secure. In particular, make sure that the metal contacts of your modem which connect to your computer are clean.
- Make sure that the terminal settings in your communications software match one of the following sets, whichever is

appropriate for your computer.

Set #1	Set #2
8 Bits	7 Bits
No Parity	Even Parity
One Stop Bit	One Stop Bit
Full-Duplex	Full-Duplex

Q: How can I get rid of the random characters that sometimes are mixed in with my text?

A: Garbled text after log-on may have many causes including noise on your telephone line, faulty equipment connections and software incompatibility. Try using this checklist to troubleshoot the problem:

• Make sure the terminal settings in your communications software match one of the sets given above. Also make sure your modem is hooked up correctly and that all connections are clean and secure.

• If you continue to receive stray characters, try switching the parity and number of bits to the alternate set.

• Noise on your telephone line can cause garbled text and often disappears when you hang up and redial the telephone access number. If the garbled text persists, your local telephone company can test your line for clearness and may, if necessary, install a filter or recondition your line.

Q: Every character I type appears on my screen twice. How can I stop this from happening?

A: Your modem and/or terminal settings are probably set on half duplex (echo on). To eliminate the double characters, change your modem and online terminal settings to full duplex (echo off). Follow the directions listed in the "Communications Settings" section of the documentation for your communications software.

Q: How can I get rid of the strange characters that appear regularly at the beginning of some of my lines?

A: Your terminal type setting is probably incorrect. Log on again and append ;TTY to your User ID number. For example: User ID 70000,00;TTY This sets your terminal type to OTHER for that session. If this solves the problem, follow the steps below to change your terminal type so the problem does not recur. (Check your communications software's documentation to see if it supports a particular type of terminal emulation.)

1. Type GO TERMINAL at any prompt and press the Enter or Return key.

2. From the Terminal/Options menu, select the option "SETTING YOUR TERMINAL TYPE."

3. Now select "OTHER" (or the setting appropriate for your software).

4. Before leaving the TERMINAL/OPTIONS area you'll be asked if you want your changes to be effective for future sessions or only for that session. Be sure to select "Make all changes effective for future sessions."

Q: I have trouble accessing CompuServe through one of TYMNET's 1200-baud access numbers. Instead of getting TYMNET's "Please type your terminal ID" prompt, I get a string of "x's." Why does this happen?

A: When you access CompuServe through the TYMNET network at 1200 baud, TYMNET's prompt "Please type your terminal ID:" always appears as a string of x's because TYMNET transmits the prompt at 300 baud. To solve the problem, type the letter A after the string of x's display (do *not* press the Return key afterward). TYMNET then will recognize that you are communicating at 1200 baud and begin transmitting data to your microcomputer at that speed.

Q: During my CompuServe log-on procedure, sometimes I'm prompted for "UIC." What should I enter here?

A: Enter a CONTROL-C. The "Host Name" prompt will display and you should type CIS and press the Return key to continue your log-on procedure. For example:

UIC: CONTROL-C <CR>
Host Name: CIS <CR>

Q: What should I do if my terminal screen freezes?

A: Try entering a CONTROL-Q. If nothing happens, enter a CONTROL-C. If your screen has been frozen for more than a minute or two, try restarting your communications software. If that does not work, hang up your modem and log on a few minutes later. (Note: It may be necessary to "reboot" your computer.) Some common reasons a screen may freeze are:

• Disconnection due to noise on your telephone line or the call-waiting beep that announces an incoming call.

• Lines you have typed or uploaded that are longer than 132 characters. Make sure that your text/data contains a carriage return at least every 132 characters.

• A full printer buffer. Try disabling your printer or emptying your printer's buffer using directions found in the documentation for your printer and communications software. Afterward, type a CONTROL-Q.

Q: Occasionally I get disconnected from the service. What causes this?

A: Since telephone lines link your computer to CompuServe, the problems that affect your phone connections also affect your connection to CompuServe. Power surges, static, electrical storms, high winds and downed wires all can cause disconnections. If your phone has call-waiting, the beep that announces an incoming call can cause you to be disconnected. If call-waiting is causing the problem, your local telephone company can tell you whether it is possible to temporarily disable the feature in your area and, if so, how it can be done.

Q: Why do I keep getting a busy signal when I dial my local telephone access number?

A: Most likely, the access computer you were trying to reach was temporarily full. This sometimes happens during peak periods of usage but generally does not last long. If it happens again, hang up and try dialing the number 15 to 20 minutes later.

Q: Why do I have difficulty accessing CompuServe now that I have replaced my 300-baud modem with a new 1200-baud modem?

A: Although there are no special instructions for accessing CompuServe at 1200 baud, here are some tips that should help you:

• Make sure the communications parameters of your communications software are set at 1200 baud and that you are dialing a 1200-baud telephone access number. (You can find a complete list of up-to-date telephone access numbers by typing GO PHONES at any prompt.)

• If you are still having problems, try changing your terminal settings to "8 Bits and No Parity" or "7 Bits and Even Parity."

Need to Keep Up with the Computer and Information Industries?

We publish all the computer industry news every day in *Online Today Electronic Edition*. GO OLT from any prompt in CompuServe and choose "Monitor Daily News" from the main menu.

ONLINE TODAY

How to Participate in a Forum Conference

Differences of opinion make horse races, or so they say. And when a CompuServe subscriber wrote me an EasyPlex recently asking if there was a place on CompuServe besides the CB Simulator to participate in an online conference, I realized that it is subscribers and their different styles that have created a world of varied conference styles on CompuServe.

The subscriber said he had tried the popular CB Simulator but that he didn't like the freewheeling style he found there. He wanted to participate in an informal conference but he'd much rather do it in a smaller group and with people more attuned to his own interests.

If you, too, would like to try conferencing somewhere besides the CB Simulator, you are in luck. Sometimes it takes new users a while to discover that each CompuServe forum has its own "CB Simulator" of sorts. It is not called CB, but each forum has a conferencing facility with many channels and nearly all the commands available on CB work in these conference areas.

The types of conferences offered on the forums are as different as the forums themselves. Most of the conferences are informal, much like the electronic chatter you'll find on the CB Simulator, but usually they are more focused on subject matter. Some conferences are formal, especially when special guests are online to field questions.

For example, new users of IBM PCs and compatibles are invited to an informal conference each Sunday at 8 p.m. EST on the IBM New Users Forum, Channel 30. The conference is an open-ended one and IBMNet forum administrators are available to answer questions from novice users about the machines they're trying to get to know. I watched one forum administrator solve a seemingly major hardware problem for a user in one sentence. Where else can you get such support so quickly and easily?

If there are no questions from subscribers, the talk might turn to any of a hundred topics, from humor to the latest announcement from IBM.

Sometimes well-knowns, including Ward Christensen, the designer of the famous XMODEM transfer protocol, stop by the conference area. You'll also find some of the top names in software companies on the list of conferees who drop by to pass time with people of like interests or to answer questions about a new version of their software.

Because the conference is informal, the only protocol is to announce yourself once you're in the conference area by typing something like "Hi, all," to let everyone know you're there. It's a good idea at an informal conference to watch for a couple of minutes until you get the drift of the conversation before plunging ahead. And if there doesn't seem to be a drift, or if there's a lull, it's perfectly acceptable in such a "bull session" to ask a question or make a comment as a springboard for discussion.

If it's a formal conference, where a special guest is fielding questions from user-conferees, the rules usually change a bit. Because formal conferences with famous speakers often draw large numbers of users, it's a good idea to know the rules before you enter the conference area. These rules usually are posted in the conference bulletin, which you'll see just before you enter the conference area.

For example, you should not announce your presence at a formal conference. At a recent conference sponsored by the Micronetworked Apple Users Group, nearly 400 subscribers were online for a conference where John Sculley of Apple Computer was the featured speaker. What if each had entered the conference area with a "Hi, all!"? It would have taken hours just for everyone to greet everyone else.

Usually, the etiquette for asking a question at a formal conference is to type a question mark and press the Return key when the moderator asks for questions. You'll be added to the list of questioners and when it's your turn, the moderator will call for your question. Make the question as clear and as brief as possible. If it's a large conference, remember that others probably have questions they want to ask.

But with the list of forums now surpassing 130 and growing everyday, how do you find a conference that fits your style?

You're in luck again. You have several options.

The conference bulletin on many forums lists the conferences planned for that forum, whether they are a regular informal discussion groups or special formal conferences. If they are special, they're likely to be listed in the forum's Short Bulletin as well.

If you're not inclined to go searching each forum for a conference schedule, you can use the *Online Today Electronic Edition* to find stories about special conferences as well as a list of the weekly conferences.

The Forum Conference Schedule (GO OLT-120) has a list of special upcoming (usually formal) forum conferences. Sometimes the list is long and sometimes short, but there's almost always a special conference or two listed at any time. If you'd like to see a list of the regularly scheduled conferences on the various forums, select "Weekly Forum Conferences" from the menu or type GO OLT-78.

David Peyton co-authored How to Get the Most Out of CompuServe. *His CompuServe User ID number is 76703,244.*

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How Instant Demographics™ and I found new banking, mall and health care sites . . . over a cup of coffee.

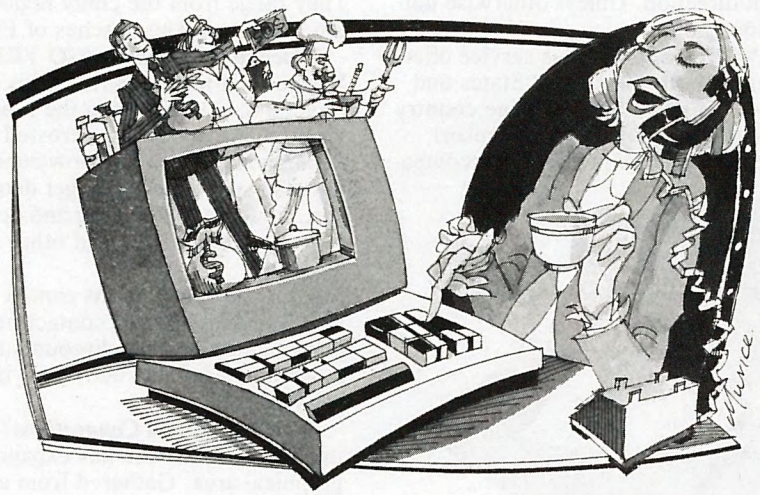
Clients think I'm a "genius consultant", but it's really CACI's remarkable information system that makes me so smart and so fast.

My banking client now knows where to open two new branches, where to locate 26 ATMs, and where to push IRAs. My health care client knows not only what areas will need the nursing homes he's building but what areas can afford them. My shopping mall client can compare sales potential figures for 9 types of retail stores at 3 potential sites.

I got them all of this information over 3 cups of coffee one day last week. That's when "Wonderwoman" became my name.

Data for any market size or shape.

I can zero in on specific intersections, ZIP codes, census tracts, circles of any radius, coffee stains on the map—



"You were right! Your market's out there, and we've found it."

markets of any size or shape. Or counties, ADI's, states, you name it. I can analyze one site or compare a thousand.

At the tips of my fingers—thousands of custom reports.

I can customize any of more than 40 available reports—including 16 different retail and 3 financial sales potential reports.

Today's data *and* tomorrow's.

Thanks to CACI's National Board of Demographers—renowned information experts—my clients are assured that the projections I give them are the very best available—no matter how far away we get from the last census.

And now, with my next cup of coffee or two, I'll work a few more wonders . . . a shopping center analysis for my new real estate client, some demographic analyses for my medical client, and several new site analyses for my franchising clients.

I can help all kinds of businesses.

I can customize reports on investments, savings, loans, apparel, footwear, sporting goods, groceries, drugs, dining out, department stores, home improvements and auto aftermarket.

The world's largest up-to-date database of demographic and buying power facts and forecasts is on CompuServe!

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Great Escapes

Plan the Perfect Winter Getaway

What's your wintertime fantasy? Snowmobiling in Vermont? Chartering a yacht in the Bahamas? Nordic skiing in Idaho? Or perhaps you would prefer something more conventional — a tour of Mexico, a trip to Walt Disney World, or a ski excursion in Vail, Colo.

Whatever your destination, CompuServe offers travel-related information. "Not only can you tailor your trip down to the smallest detail, but also you can make online reservations in most services," says Toni Linse, CompuServe associate product marketing specialist. Conditions for reservations and other booking stipulations vary with each service. Some services, for instance, require non-refundable deposits.

Your travel plans could become submerged in last-minute details if you are not sure what you are looking for. Here is a round-up of several popular wintertime getaways and services to help point you in the right direction. Unless otherwise noted, reservations can be made online.

American Express ADVANCE (GO AXP) This service offers American Express vacations in both the United States and abroad. Options include tours of the California wine country and Walt Disney World, along with major city and resort packages. An American Express tour manager may accompany you during your trip or greet you at your destination point. Other amenities, such as transfers between airports and hotels, baggage handling, and taxes, often come with the trip. Tour prices do not include airline tickets.

Major points of interest in places such as Houston, Miami, San Diego, San Francisco and Mexico are briefly described, along with a list of hotels, types of rental cars and prices. Options for resorts in Arizona, California and South Carolina are similarly set up. The Walt Disney World package provides a list of things to see and do in the Magic Kingdom, Epcot, Orlando and nearby areas. On-site and official Walt Disney World accommodations, package options and admission tickets also are offered.

Subscribers wanting a complete listing of maps, hotels and places of interest can purchase American Express ADVANCE Travel Pocket Guides for $8.95. *The Sky Guide*, a monthly magazine, provides a description of all flights and is available for a subscription rate of $35.

CompuServe's other vacation services are more specialized, organized by either geographical location or climate. They range from the chilly regions of Vermont and the Western Rockies to the beaches of Florida and the Bahamas.

Welcome to Vermont (GO VERMONT) Provided by the Vermont Office of Tourism, this online guide has an extensive travel database covering the Maple Sugar State. Wintertime vacationers would be interested in the ski and snowmobile facilities. Not only are snow conditions reported continuously but also subscribers can get detailed information on each resort, down to the number and description of lifts, ski lessons, room/lodge facilities, and other amenities at the resort and nearby.

Although reservations cannot be made online, phone numbers and addresses of contact people are included. *SkiWeek*, a magazine featuring discounts and ski packages and recommending places and activities, is available without charge to subscribers.

Rocky Mountain Connections (GO ROCKIES) is similarly set up, but the database has expanded in proportion to the geographical area. Gathered from a variety of sources, vacation information on Colorado, Idaho, Montana, Nevada, Utah and Wyoming is compiled by the Intermountain Computer Service. Extensive state travel guides cover attractions, recreation areas, dining/entertainment, accommodations, ski resorts/lodging and more. Slope, weather and road conditions are updated weekly.

With an array of standard ski activities, this service offers unparalleled snow excursions. Colorado has helicopter skiing (not for the faint-hearted or novice skiers); Idaho provides Nordic skiing and snowmobiling on vast, rugged terrain; and Montana has "ski and soak" hot springs resorts.

Sun 'N Sand Vacations (GO SNS) This service offers domestic and international vacations and cruises in warm climates. The information provider, Educational Media Services of Orlando, Fla., uses only established travel services and hotels. Subscribers can choose from several customized tours and packages in Hawaii, Florida, Nevada and Mexico. For example, a standard trip to Hawaii includes round-trip airfare, accommodations for seven or 10 nights, possibly a rental car and more. Options include your selection of type of room and car, and special packages for golfers, honeymooners and divers.

For Mexico, hotel-only packages, optional excursions and inclusive packages are offered for major cities and resort areas such as Acapulco and Cozumel. Not only do the packages range from three to nine nights and longer but also the inclu-

sive tour has a complete, day-by-day itinerary. Sample air fares are included for both the US and Mexican databases; these reservations also can be made online.

With established cruise lines such as Carnival, Dolphin and Windjammer, you can sail to nearly any tropical port. Food, entertainment and activities abound, along with stops at glamourous ports of call. Serious and would-be sailors can rent or charter yachts in the Caribbean or the Bahamas for a minimum of seven nights. Note, however, that some packages are more complete than others. Simply chartering a yacht does not cover food, a skipper and other necessities. Smaller bareboats are available for the more knowledgeable and experienced sailors.

Discover Orlando (GO ORLANDO) Those desiring less exotic individual or family getaways can explore Central Florida. Sponsored by TravelNet, a division of Educational Media Services of Orlando, this service offers in-depth descriptions of more than 25 attractions. These include less-traveled spots as well as Walt Disney World, Kennedy Space Center, Busch Gardens and Sea World. Subscribers can obtain an "Attraction Action" card offering discounts of up to 50 percent.

Subscribers wanting a more leisurely vacation can choose from the recreation options of Florida's central-east, central and west coasts, and the Kissimmee-St. Cloud resort area. Complete information on events, canoe trails and state parks is provided.

If you like out-of-the way explorations, "Nifty Fifty Adventures" is just for you. These are the places few tourists see. Every imaginable type of food, entertainment, hotel, motel and campground is covered. A quick reference index summarizes listings by location, hours, miles and phone numbers.

Depending upon the vacation you choose, you can make flight reservations at the same time as your travel plans. Both the Official Airline Guide Electronic Edition (GO OAG) and Travelshopper (GO TWA) offer comprehensive fare and flight schedule information and online reservations. These services display fares from lowest to highest, posing multiple methods for obtaining your ticket. They also have toll-free "Help" lines.

In addition to allowing users to make flight reservations online, the Official Airline Guide Electronic Edition provides a comprehensive listing and rating of hotels and motels at your destination. Persons signing up for Travelshopper become instant members of TWA's Frequent Flight Bonus program and are given 3,000 miles credit toward free travel. Other amenities, such as a flight format guide, are included. Subscribers can make online reservations at any time.

If you do not find a certain type of hotel or chain in a given vacation service, you might want to check the ABC Worldwide Hotel Guide (GO ABC). Along with a 27,000-plus hotel listing, this guide includes details on location, appearance and atmosphere; architecture and history; and nearby places of interest. Users can search for and narrow down their choices by specifying city, hotel name/chain, range of room rates or required facility/service. Subscribers must make their own reservations.

Or if you are looking to purchase, rent or exchange vacation accommodations, the Worldwide Property Guide (GO WWX) might be your passport. Thousands of homes, condos, cabins, villas, boats and motorhomes can be found here. The database also contains bed-and-breakfast accommodations. There is a surcharge to post a property listing. Each property description includes rates and availability dates.

"Not only do these services eliminate hours of research and dozens of phone calls, but they also make planning your dream vacation almost as relaxing as the time off," says Toni Linse. So what are you waiting for? Type GO TRAVEL.

— Sandra Gurvis

Take to the Slopes

Rocky Mountain Connections (GO ROCKIES) has all the information you need to select a ski resort in six Western states. If you prefer to ski in the northeast, access Vermont Tourism (GO VERMONT) for a guide to the slopes.

Both services offer information on ski packages, customized travel packages, cross-country skiing, ski events, ski lessons and more. Lift ticket prices, facilities, elevations and other details are included with descriptions of the major resorts.

CompuServe's other travel services will come in handy when you plan a ski vacation. West Coast Travel provides information on the Western states. If your plans include renting a condominium on the slopes, check the Worldwide Property Guide. You can make airline reservations through Travelshopper or the Official Airline Guide Electronic Edition.

All of this information is available to CompuServe subscribers through Dec. 31, 1986 in the Ski America database. Several of the services have travel-related discounts and offers to those planning a ski trip before Dec. 31. For more details, type GO SKI.

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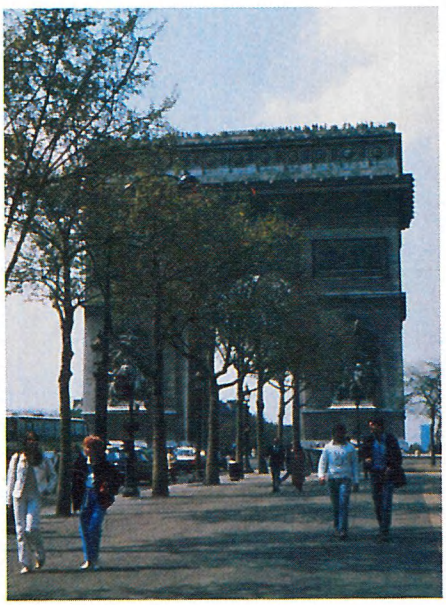
Last-Minute Shoppers Find Gifts at The Mall



Many last-minute holiday gift suggestions await you at The Electronic Mall. Here are just a few:

Why not promise her springtime in Paris? Visit Air France, request a free Paris Plus Tours brochure or a free map of the city and tuck it into her Christmas stocking with a note and date of departure. GO AF

To give a New Year's holiday in New York, visit Ameropa Travel and see the selection of New York Spectacular packages. Most packages (three days/two nights) include accommodations at the hotel of your choice, dinner at a renowned restaurant such as Mama Leone's and tickets to a Broadway show. GO AT

At new Mall merchant AT&T you can give the gift of gab. Select from a range of telephones, answering machines and communications equipment. Recommended for last-minute gift giving is an AT&T gift certificate for long-distance

calling. Order before Dec. 12, 1986, and this gift package, including five $5 gift certificates, will arrive in time for the holidays. GO ATT

Visit new Mall merchant Inside Outside and browse the collection of quality lingerie and intimate apparel. Nightgowns, teddies, camisoles, pajamas — all in 100 percent silk or 100 percent cotton — can be ordered online. GO IO

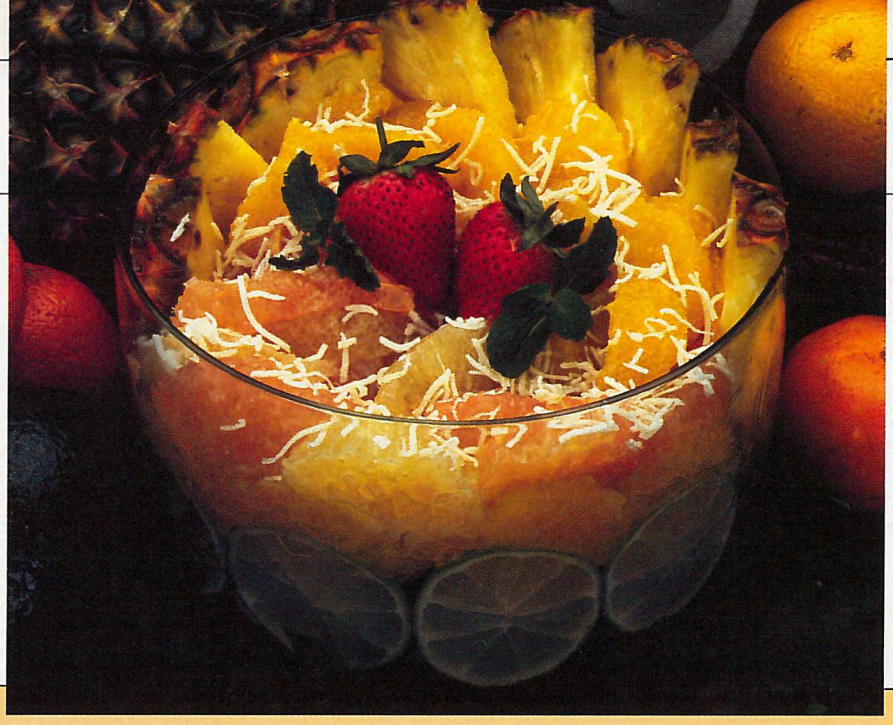
Visit Fifth Avenue Shopper and choose from two special holiday bouquets. Each includes a selection of seasonal flowers arranged in the holiday spirit. Also featured are poinsettia plants, a holiday table centerpiece and a holiday fruit basket. GO FTH

Visit Walter Knoll Florist, a leading FTD and Teleflora professional, and give the gift that lives. The online catalog features seasonal selections including mistletoe and indoor tropical plants that will continue to grow all year. You'll also discover unique gift ideas such as a mylar balloon bouquet, a silk hanging basket arrangement and a personalized mailbox. GO WK

For friends, relatives and business associates, coast-to-coast or abroad, consider giving the gift of Florida sunshine. Florida Fruit Shippers features tree-ripened, hand-picked citrus fruits. Especially suggested for the holidays are "Pick of The Grove," four citrus varieties in a one-bushel pack, and "The Luau," a tropical treat complete with mangos, avocados, pineapples and a co-

conut. When you order Florida Fruit Shippers' "Fruit Club," your friend will receive seasonal selections with your compliments all year. GO FFS

Now that you've discovered the luxury and convenience of holiday shopping at home, why not share the secret with your friends and neighbors? Be the first on your block to host an electronic holiday shopping party. Invite your friends to bring their favorite Christmas cookies and their charge cards. Then, gather around your personal computer and GO MALL.



APPAREL/ACCESSORIES

APC	Apparel Concepts for Men
ATH	Athlete's Outfitters
CA	Casual Tee's
IO	Inside*Outside
LH	L'Eggs/Hanes Outlet
MJ	Milkins Jewelers
BAG	Woodstock Leather Co.

AUTO

ATB	American Tire Buyers
AMS	AMS/Oil Dealer
BU	Buick Magazine
CHV	Chevy Showroom
FMC	Ford Motor Co.

BOOKS

BAL	Ballantine Books
DII	Christian Book Store
MH	The McGraw-Hill Book Co.
MER	Mercury House
WB	Waldenbooks

CAREER/SELF-HELP

TDG	Teledata*Guide
WS	Wayside Systems

COMPUTING

CE	Computer Express
CL	Conroy-LaPointe
DSC	Discount Computers
GL	Great Lakes Business Forms
HMK	Hallmark Color Mail
HTH	The Heath Co.
IR	Icon Review
IS	Investment Software
DSK	1-800-Floppys
MM	Marymac Industries Inc.
MNU	Menu International
MO	Misco Computer Supplies
SR	Sears, Roebuck & Co.
SDA	Software Discounters of America
WOC	World of Computers

FINANCIAL

BNB	Beneficial National Bank USA
INC	Business Incorporating Guide
CN	Colonial National Bank USA
DWR	Dean Witter Reynolds
EL	Equitable Life
MU	Max Ule Discount Brokerage
SLG	Sun Life Group

GIFTS/GOURMET

AK	Alaska Teleshopper
COF	Coffee Emporium
EX	Executive Engraver
FTH	Fifth Avenue Shopper
FFS	Florida Fruit Shippers
HI	Hawaiian Isle
HH	Hobbit Hole/Wyandotte Wines
LM	Lincoln Manor Baskets
NUT	Morrow's Nut House
SIM	Simon David
WK	Walter Knoll Florist

HOME/LEISURE

CC	Cosmic Concepts
GG	The Game Getters Inc.
HC	Hobby Center Toys
MAO	Music Alley Online
RR	Rin Robyn Pool & Patio
TSR	TSR Hobby Shop
VCS	Vacuum Advance

MERCHANDISE/ELECTRONICS

AA	American Airlines Catalog
ATT	AT&T
EGS	Electronic Gadget Store
NCS	Nationwide Catalog Shopper
SR	Sears, Roebuck & Co.
SUN	Sunland Camera
ELM	World of Electronics
XDM	Xerox Direct Marketing

ONLINE SERVICES

EF	EF Hutton
GLO	Globalink
NN	NewsNet
OA	Official Airline Guides
VL	Videolog

PERIODICALS

CW	CW Communications
DJ	Dow Jones & Co.
ME	EBSCO Magazine Entree
ECO	ECOPRESS
US	USA TODAY

PREMIUM MERCHANTS

AXM	American Express
BL	Bloomingdale's By Mail
NM	Neiman-Marcus
TIF	Tiffany & Co.

RECORDS/MOVIES

CF	CBS/Fox Video
EMC	Express Music CDs
MV	Magic Castle Video
RC	RCA Direct Marketing
RW	Record World

SPORTS/HEALTH

HF	Carolina Health & Fitness
VM	VitaMenagerie Discount Vitamins

TRAVEL

AF	Air France
AT	Ameropa Travel

The Electronic Librarian

IQuest Database Searches Magazine Articles

If you haven't the time or the patience to corner a librarian, thumb through volumes of indexes, or roam about rows of periodicals to find the article that you're looking for, Magazine ASAP may be just what you need. Magazine ASAP provides you not only the information needed to find an article but also a full-text display of the article.

One of more than 700 databases available through CompuServe's IQuest service, Magazine ASAP offers full-text indexing and article displays of more than 80 American magazines. Articles, news reports, editorials, product evaluations, biographical pieces, short stories, poetry, recipes and reviews as far back as 1983 are contained in the database.

The database includes magazines such as *Time*, *People*, *Forbes*, *US News and World Report*, *Science*, *Fortune*, *PC Week*, *Sports Illustrated*, *Sunset*, *New Republic*, *Stereo Review*, *PC*, *Industry Week*, *Rolling Stone*, *Money*, *Nation*, *Financial World*, *Playboy*, *Science News*, *Changing Times*, *Popular Science*, *Smithsonian*, *Scientific American*, *Life*, *Psychology Today* and the *Ladies Home Journal*.

Menus make it easy to search Magazine ASAP by topic, organization name, place name, person named in the article, product named in the article, title of article, author's name, magazine title, magazine's issue date, year of publication, type of article, special features in the article and geographic area.

The ease and convenience of using Magazine ASAP to find titles, volumes and page numbers of magazines having articles of interest to you may be reason enough to go online instead of to the library for future magazine searches.

Another significant advantage to using the Magazine ASAP database is the option of reading the full text of any article found in the database. (Those who have spent time locating the title, volume and page number of a magazine in a periodical index only to find that the library does not carry the magazine, or worse, that the particular issue is missing, can certainly take heart in this feature.)

To illustrate how to use the database, let's say that you wanted to read an article mentioned today by your co-workers. They said it was by William F. Buckley and that it appeared in *Money* magazine, but no one was sure of the date. Magazine ASAP can be your private librarian and find the article for you.

To begin the search, type GO IQUEST at any prompt. Once you have accessed IQuest, choose option 2, "IQuest-II: You pick the database." IQuest will respond with the prompt, "Please enter the vendor or database as you know it (use B to back up)." Type MAGAZINE ASAP and press the Return key. (Note that when IQuest says "Use B to back up," it means to type B if you wish to return to the previous menu. If you make a mistake while typing an entry, just backspace as you usually would do to correct it.)

Next, IQuest will display a menu of search criteria. Choose Option 2, "By Personal Names." IQuest then will display a menu from which you can choose to search by the author's name or the person named as a subject in the article. Select Option 1, "By Author."

As you proceed, IQuest periodically will display the total charges you have accrued to that point. In addition, if a database is surcharged, IQuest always will display the charge for a search before you actually begin it and ask you whether you wish to continue.

At the "Enter the Last Name" prompt, type BUCKLEY, WILLIAM F., JR. You also may enter the last name, followed by a comma and a space and then the first initial followed by a "/" if you are certain that the name is unique or that you are unlikely to find articles by several people with the same name.

From the next menu, select Option 2, "Add More Fields," since you are looking for an article in a specific publication and not all of his published works. Then, select Option 5, "By Magazine Name," and from the next menu, Option 1, "Magazine Name Search." Type MONEY at the "Enter Journal Name(s)" prompt.

From the next menu, choose the "Start the Search" option. At this point, IQuest sets off with the information you have provided, accesses the Magazine ASAP database, and searches for and retrieves articles meeting your search criteria. A series of messages will show IQuest's progress until you see the message, "Search completed."

Next, IQuest tells you the number of articles it found to satisfy your search criteria. IQuest then is ready to display up to the 15 most recent headings, from which you can choose to display the full text of one article. There is no additional charge for one display (beyond the initial charges for beginning the search).

Once you have reviewed the 15 headings and text of one article, IQuest will display a menu from which you can choose to review the headings or text (again at no extra charge), to review 15 more headings and the full text of one more article for an additional charge, to start a new search or to exit IQuest.

Real-time, around-the-clock help is available for questions you have about using Magazine ASAP or any other database available through IQuest. Just type SOS at any IQuest −> prompt.

As with searches of all databases accessible through IQuest, it is helpful to develop a search plan before going online. By listing the criteria on paper, you can structure and sharpen your search technique so that when you do go online, you can get in and out of the database for a minimum amount of money and effort.

— Matthew Burns

Bytes of Apple

How to Find Information on Apple Computers

CompuServe subscribers interested in Apple computers can have their pick of four Apple forums and a comprehensive display database called Apples Online.

The Apple Forums grew from a tiny seed planted in 1978 by Forum Administrator Neil Shapiro. "I left a message for Apple users on CompuServe's National Bulletin Board," he recalls. "Four people responded." However, membership quickly snowballed into the hundreds, resulting in a single forum for all types of Apple computers.

With the release of the Macintosh in 1984 and the synthesis of a "hard core" group of programmers and developers, the forum split into three groups last year: the Apple II/III Forum, the Macintosh Users Forum and the Macintosh Developers Forum. A fourth forum, the Apple User Groups Forum, was added in June of this year.

Through Apples Online, subscribers can access information from the Berkeley Macintosh Users Group from the University of California and the Washington Apple Pi Users Group. The latter provides advice and tips on Apple computers in general, along with industry news and reviews. "Although these groups meet locally, they have members scattered throughout the country, providing the advantage of a nationwide network," observes Shapiro.

Apples Online also offers several electronic magazines. *The Apple III Newsletter* is specifically geared toward owners of the Apple III, no longer manufactured by Apple. Along with providing a support group, this newsletter helps locate locally available hardware and software, and encourages users to produce and discover new products. It also contains a continually updated software library and notifies users about errors in Business BASIC.

The Icon Review is a specialty discount retailer offering more than 400 Macintosh-related products and representing a vast selection of software and accessories. Nearly 60 product reviews from the current catalog are posted. Subjects range from video games to the most complex programming tools.

MacDeveloper, geared for Macintosh developers, contains development tools, tips on how to use Macintosh ROM, programming techniques and algorithms for all areas. It serves as a consumer advocate and is for advanced users only.

Apples Online magazine maintains records of conversations on all Apple forums, keeping subscribers informed on three months' worth of events. "The forums are used so much that important information may scroll into oblivion before members see it," explains Shapiro. "This way, they won't miss anything." Future issues will feature hardware and software reviews, articles, columns and departments.

Apples Online magazine also provides a roadmap for beginning Apple Forum users. "Learning how to use these forums can be confusing, so we offer help files on uploading and downloading," comments Shapiro, who recommends reading these files before starting.

Except for subject matter, the four Apple forums are identical in setup. The message area, according to Shapiro, is the heart and soul of the forum, where people get to know one another. Similar to many public bulletin board systems, users have the added advantage of receiving more than one reply.

The message area is divided into sections containing subtopics of interest.

The data libraries of the Apple forums boast thousands of public-domain programs, reviews and files that can be downloaded. Like the message areas, the data libraries consist of different sections, with contents corresponding to the sections in the message areas. The conference area allows members to communicate in real time.

"Informal chats are an excellent way to locate others with the same interests, while formal meetings have featured such eminent guests as Steve Wozniak, Doug Clapp, Dan Cochran, Jean-Louis Gassee, Guy Kawasaki, Mark Pelczarski, Bill Atkinson and John Dvorak," says Shapiro. Online conferences also have included "live" online product announcements from the Mac World Exhibit in San Francisco and speeches from the annual Apple stockholder meeting, which included John Sculley, chairman of Apple Computer Inc.

Membership in the four forums is free. Specific offerings include:

• Macintosh Users Forum (GO MACUS) contains "Show Your Face" with VMCO, a Macintosh conferencing utility in which users can see and hear other conferees. Participants program animated images of their own likenesses, controlling up to nine different facial expressions. The speech synthesizer in the Macintosh also allows them to modify their voices.

Several files are available to help users ease into VMCO. MACUS also covers basic products, programming and games and has a general interest "Community Square." Music, art and telecommunications files can be found here along with information on the Lisa, the Macintosh's predecessor, and desktop publishing. As with all four forums, bulletins provide an overview as to what's happening in conference, data library and membership information areas.

• Macintosh Developers Forum (GO MACDEV) represents a "home" for software and hardware developers. "Although this forum is not restricted to professionals, beginners seeking advice or answers to basic questions should query MACUS," suggests Shapiro. Developers can swap tips and techniques on difficult technical questions, trade business advice and share the latest industry news. The Macintosh Software Supplement as well as Apple newsletters and tech notes are also available. *Inside Macintosh*, the developer's Bible, will soon be online.

• Apple II/Apple III Forum (GO APPLE II or APPLE III) is similar in content to the MACUS. This Apple forum provides data on software and hardware, general programming and systems, games and graphics, with a special subsection for Apple III users. Product-specific news on the Apple IIc, the II Plus and the IIe also can be found here.

• The Apple User Groups Forum is designed for people who are interested in finding out about Apple User Groups. Members of large and small user groups alike can find online help for daily user group problems and volunteer solutions to others. The forum is the official online gathering place of Apple User Groups worldwide supported by Apple Computer, Inc.

Over the years, the Apple Forums have earned the support of the Apple Computer Inc. "Employees come online nearly every day to answer user questions, ranging from how to turn on the printer to how to design new programs," says Shapiro. "The five other administrators and I wanted to make the Apple Forums the place to learn about these computers." Today we offer a national clearinghouse for information. To access it, type GO MAUG at any prompt on the CompuServe Information Service.

— Sandra Gurvis

Apple Grower:

Forum Leader Polishes Fruits of Online Labor

He lives in New York state with his wife, two children and at least three Apple computers. As founder and forum administrator of the Apple forums, a popular area of the CompuServe Information Service, Neil Shapiro is one who thrives on 20-hour days. Those long days are necessary for Neil to run four active forums, edit *MacUser* magazine and still have time to dabble in some hobbies (such as collecting rare books). How did this man who regularly wrote science fiction (two published novels and many short stories) end up as the forum administrator for the Apple forums on CompuServe?

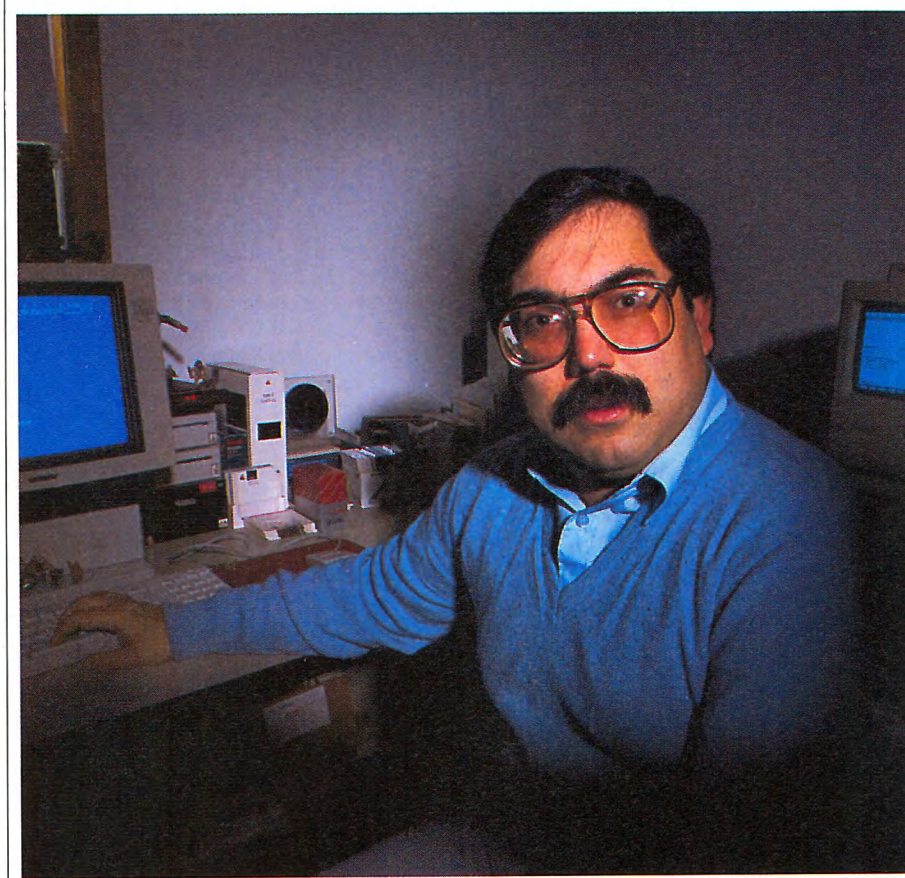
"I've been involved with personal computing since 1977. I was working as a technical editor at *Elementary Electronics* magazine when Apple made one of their first public relations trips to New York. Since I was the only one at the magazine interested, I went down to take a look at the demo. I ended up playing *Star Trek* on it for quite a while, and after the demo I bought the machine. Soon after that I was one of the first journalists invited to check out what was then called MicroNet, that evolved into today's CompuServe. One of the first things I did when I got onto MicroNet — there were no forums or anything like that — was to leave a note on the National Bulletin Board and ask people who had Apple computers to meet me in conference.

"We met and started MAUG, which at that time stood for MicroNet Apple Users Group. We met in conference every Sunday night for two years. About this time, CompuServe began investigating the idea of bulletin board software. I started working with some people at CompuServe in about 1979, and by 1980 I got a call from CompuServe saying, 'The forum is ready. Would you like to be an administrator?' I had never heard the term 'forum administrator' before, but I said OK and that's how the MicroNet Apple Users Group started."

Neil is quick to spread around the credit for keeping the Apple forums humming smoothly:

"It is my responsibility to see that all of the Apple forums and the display products run as smoothly as possible. The way I've done it is to put together a staff of dedicated individuals who love what they're doing and have what I'd call good telecommunications personalities.

"On each of the forums, I have one person who serves as the primary forum administrator. His responsibility is to



Branching out: *Four Apple forums,* MacUser *grew from Shapiro's seed*

Apple Offers Software Updates

Anyone who buys a Macintosh computer receives operating software, called the System and the Finder, as well as several utility programs and other operations files. Apple continually updates and improves this software. But until now, Macintosh owners had to visit a knowledgeable dealer to have the updates made.

Apple now has licensed the software for electronic distribution.

Macintosh owners can instantly update their software online for no charge other than the regular CompuServe connect time and the communications surcharge.

System 3.2 and Finder 5.3 are now in Data Library 1 of the Macintosh Users Forum. Font/DA Mover and other files also are available there. System and Finder, as well as many technical files useful to programmers and developers, are available in Data Library 8 of the Macintosh Developers Forum.

Anyone downloading the files and programs should read the file LICENS.TXT in the data libraries. This file is an "electronic shrinkwrap license" protecting Apple's copyright and proprietary interests in these Macintosh system materials.

All of the files have been uploaded in MacBinary format, a worldwide standard developed in MAUG. CompuServe subscribers can obtain the files by using any of the popular terminal programs for the Mac. Complete information on how to download by using the MacBinary format is available in the Apples Online area. Type GO AOL and read the "Introducing MAUG" choices.

To access the Macintosh Users Forum, type GO MACUS at any prompt on the CompuServe Information Service. To access the Macintosh Developers Forum, type GO MACDEV at any prompt.

read all the messages on his forum and respond to any that need a response and to keep abreast of other forums. Dennis Brothers, a well-known programmer who wrote the Microphone program for the Macintosh, is the primary forum administrator on the Macintosh Developer's Forum.

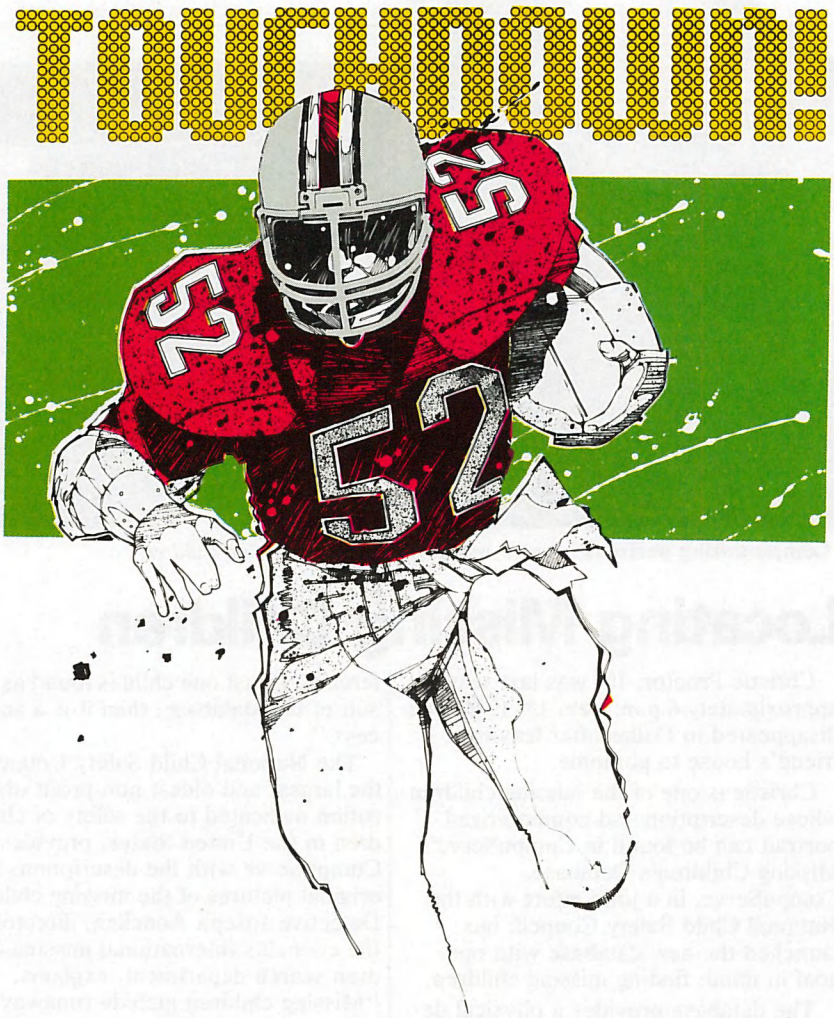
Bill Steinberg is one of the best video engineers in the country and has won a number of Emmy awards. Bill is the primary administrator on the Macintosh Users Forum. Shawn Goodin, when he's not busy running one of General Motors' computer divisions, is the primary administrator on the Apple II & III Forum. And Bill Cook, who manages a division of Pitney-Bowes, is the primary administrator on our new forum, the Apple User Groups Forum."

With all the traffic on the forums, alternate forum administrators are a necessity. Neil feels the service has been fortunate to attract people like Harry Conover, Don Brown, Bob Perez, George Slusher, Bart Thomas and Robert Wiggins. With Ellen Leanse and Catherine Hoolihan, user group evangelists from Apple Computer, these people round out the online staff. And if the superbly qualified staff is any indication, Neil's effort has been successful.

"I have two professions that I'm trying to bring together. One is journalism and the other is telecommunications. In journalism, I'm most proud of the founding of *MacUser* magazine," says Shapiro. "And, of course, in telecommunications it was being able to turn the forums into a cross-section of the entire Apple community so anyone with an Apple can log on. Even so, I would like to stress that we're not a hardware forum, we're a people forum. It just so happens that all the people on the forum have the same kind of hardware. We've always tried to make it a friendly, congenial spot to meet people who share at least some of those interests," he continues.

"I'm having too much fun to do anything else. Of course, sometimes when I log on it is a hassle, but most days it is like being in a club I'd want to join anyway. We all are excited about the new machines that Apple will be releasing in 1986 and 1987 in both the Macintosh and Apple II realms. We are already working on ways to make sure that the Apple forums will be the best place to learn about those new machines.

— James Moran



Football has been a favorite pastime of online sports fans on CompuServe for several seasons. Pick a team name. Select offensive formations. Call plays. Punt? Pass? Kick? Coach, it's your call.

Interested? Let's huddle. We want to tell you that CompuServe's football league has been expanded to address more sophisticated aspects of the game.

This season we're pleased to announce the formation of the **Advanced Digital Football League**. This simulation includes timed quarters of play, a time clock, time outs, a variety of play formations (you can also create your own) and an online "Assistant Coach" (whose advice you're welcome to ignore)!

CompuServe®

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Columbus, Ohio 43220

An H&R Block Company

Drafted? Not signed? Get in either game! Just type GO FOOTBALL or GO ADFL at any prompt on the CompuServe Information Service.

Computerizing portraits: *Losco, Yeauger help locate missing children*

Locating Missing Children

Christie Proctor, 10, was last seen at approximately 6 p.m. Feb. 15, 1986. She disappeared in Dallas after leaving a friend's house to go home.

Christie is one of the missing children whose description and computerized portrait can be found in CompuServe's Missing Children's Database. CompuServe, in a joint effort with the National Child Safety Council, has launched the new database with one goal in mind: finding missing children.

The database provides a physical description of each child, including the child's age, height, weight, race, sex, hair and eye color, and identifying marks such as scars or birthmarks. The date and location at which the child was last seen and, if known, the circumstances surrounding the child's disappearance also are supplied.

The computerized portraits of the children provide a unique opportunity for the identification and safe return of the missing children. The portraits are largely a result of the work of John Losco, CompuServe electronic graphics designer, and Gary Yeauger, CompuServe systems programmer and analyst. Losco notes, "The technology that makes the pictures possible basically was established in our research and development of the pictures used in the FBI 10 Most Wanted service." Losco's and Yeauger's work also has made possible the pictures that appear in CompuServe's *MegaWars III* game and CB Simulator.

"I've always wanted to do something like the Missing Children's Database," says Losco, "I believe it can make a difference. If just one child is found as a result of this database, then it is a success."

The National Child Safety Council, the largest and oldest non-profit organization dedicated to the safety of children in the United States, provides CompuServe with the descriptions and original pictures of the missing children. Detective Joseph Anneken, director of the council's international missing children search department, explains, "Missing children include runaways, children abducted by a non-custodial parent, and children abducted by persons unknown. The children featured in the Missing Children's Database have been abducted by persons unknown."

The council has been working with a medical illustrator to develop pictures of each of the abducted children as they look today. "Sometimes the only picture of a child that we have is an old school photograph," says Anneken, "The medical illustrator can construct a picture that shows how a person would look today based on a picture of the person that may be several years out-of-date."

The current database is just a beginning. Losco plans to add more descriptions and portraits each month. "We hope to keep building up the database until it includes entries for all the missing children on record with the National Child Safety Council," he says.

To access the Missing Children's Database, type GO MISSING at any prompt on the CompuServe Information Service.

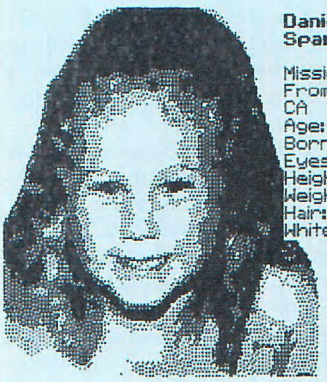
— Matthew Burns

Chad William Thompson

Missing: 10/7/85
From: Buffalo, NY
Age: 11
Born: 8/9/74
Eyes: Brown
Height: 4'3"
Weight: 85 lbs.
Hair: Black
White male

Christie Dianne Proctor

Missing: 2/15/86
From: Dallas, TX
Age: 10
Born: 2/29/76
Eyes: Blue
Height: 4'10"
Weight: 75 lbs.
Hair: Brown
White female



Danielle Lou Sparpana

Missing: 11/2/85
From: Woodland, CA
Age: 4
Born: 6/23/82
Eyes: Blue
Height: 3'
Weight: 40 lbs.
Hair: Blond
White female

Kristen Kozlowski

Missing: 10/26/85
From: Tonawanda, NY
Age: 18
Born: 11/11/67
Eyes: Green
Height: 5'5"
Weight: 140 lbs.
Hair: Blonde
White female

Ask Customer Service

Q: How can I find what stores are listed in The Electronic Mall?

A: The Electronic Mall offers a Merchant Directory that will provide either an alphabetical or departmental listing of merchants. Select it from The Electronic Mall's main menu.

Q: I am interested in locating a specific product in The Electronic Mall. Is there a way I can find the product without entering each store?

A: CompuServe's Electronic Mall provides a Mall Product Index that lets you see a list of merchandise by category. When you select a category of interest, you then will receive a list of specific products found in The Mall. Once you have selected a product, you will see a menu of merchants who carry it.

Q: If I encounter a problem with an order I have placed in The Electronic Mall, who should I contact to resolve the problem?

A: Orders placed in The Electronic Mall are handled by the individual Mall merchants. If you experience a problem with an order, you should first contact the merchant to resolve the problem. Many of the merchants provide an EasyPlex mailbox to which you can send a message. Other merchants provide a telephone number or address to contact them. If you have contacted the merchant and still have not received satisfaction, you can select "Talk to the Mall Manager" from The Mall's top menu and send a message to the Mall Manager for assistance.

Q: If I select to order a product from The Electronic Mall, can I have the product billed to my CompuServe account?

A: Orders placed in The Electronic Mall are handled by the individual merchants. Each of these merchants will supply you with the billing options they provide for ordering their products. Since the orders are filled and billed by the individual Mall merchants, you cannot have a product billed to your CompuServe account.

These answers and more are available in Customer Service's Question & Answer Database. You can find answers to questions about billing, logging on, using forums, sending EasyPlex messages, using the Personal File area, setting up a personal menu and more. Type GO QUESTIONS at any prompt on the CompuServe Information Service.

Gift of Time

Online Today offers subscribers the chance to write a 200-word essay on how they use CompuServe's Information Service.

Your essay should be typed, double spaced. Send it to *Online Today*, CompuServe Incorporated, 5000 Arlington Centre Blvd., P.O. Box 20212, Columbus, OH 43220, or by an EasyPlex message to 70003,1661. Please include your full name, address and User ID number.

If we use your column, you will receive 10 hours of standard service connect time (a $60 value) and a byline.

Subscriber Uncovers History Online

My great-grandfather, George Foster, opened one of the first newspapers in Guthrie, Okla., during the famous land rush in 1889. Later, he was the night editor for the *Kansas City Star*.

I wanted to find out about his life, but local libraries had little more than sweeping histories and my letters to the city of Guthrie and the offices of the *Star* were never acknowledged. Then I accessed IQuest through CompuServe and had the information in minutes.

I subscribed to CompuServe long before IQuest was added, because as a writer I found the news and electronic mail services useful. But for much information I still had to waste time driving on freeways and searching in library basements.

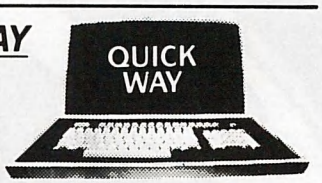
Anyone who has ever tried to locate difficult material knows the agony of chasing around information centers and mining through microfilm. Professional research labs are expensive and not always complete. Newspapers are even more limited and difficult to reach by phone.

While the downtown Los Angeles library was being destroyed by fire, I came across an article about the new IQuest service — and just in time.

Now when I need to know something as obscure as the life of a relative from a century-old frontier newspaper, I only have to dial up CompuServe.

Michael Cartel
Toluca Lake, Calif.

24 HOURS A DAY



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- QUICK WAY is available through CompuServe—the largest computer information network—which allows you instant access to Standard & Poor's Reports, Value Line Data Base II, and 10 years of market data on some 50,000 securities.

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MAIL COUPON FOR INFORMATION PACK 131

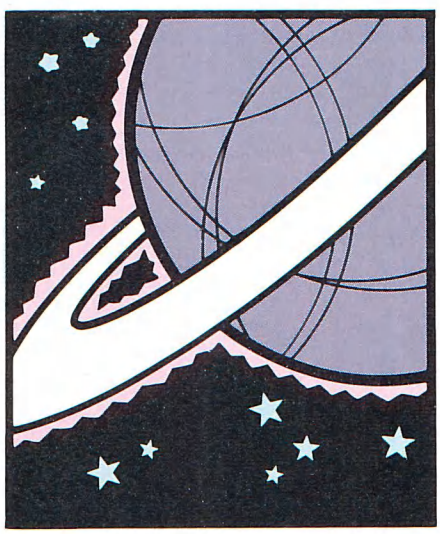
GO EBB or circle 9 on the Reader Service Form.

NEW PRODUCTS

Science Trivia Game Online

Science Trivia, a new trivia quiz on the CompuServe Information Service, contains thousands of multiple-choice questions on biology, chemistry, physics and mathematics.

Since Science Trivia is designed to match the style and complexity of The College Board's Achievement and Advanced Placement Tests, the quiz also serves as an excellent review for high school students studying for the SAT and ACT tests. GO SCITRIVIA



Change Made to *MegaWars I*

There has been a significant change to the game *MegaWars I: The Galactic Conflict*, making the game easier to win and more enjoyable.

MegaWars I is a real-time space battle played by up to 10 players at a time. To win a game in *MegaWars I*, players must conquer the galaxy by eliminating all enemy installations and neutral planets. In previous versions no planets of any kind could remain if one side was declared the winner. If a side still had friendly planets and all enemy ships left the game, the war ended in a stalemate.

The game has been changed to allow a win even though a side still has established planets. This means that if all of one side's players leave the game, the other side can continue to play and go on to conquer the galaxy. GO MEGA1

New VAX Program Available

A new B protocol file transfer program for the VAX/VMS operating system is now available through CompuServe. The program allows subscribers to conveniently download or upload programs and textfiles from CompuServe to the VAX/VMS operating system directly.

Called the HOST32 program for VAX/VMS, it is a combination terminal emulator and file transfer program supporting fast, error-free transmissions.

A split-screen conference program also is under development for use in the VAX Forum's weekly conferences on Wednesdays at 9:30 p.m. EST. GO VAXSIG

EasyPlex Adds Features

EasyPlex has two new features to make sending electronic mail easier. Subscribers now can use the SEARCH and DIRECTORY commands at the EasyPlex "Send To:" prompt. These commands allow you to view the names and User ID numbers of your mail recipients.

At the "Send To:" prompt, you can type /DIRECTORY (or /DIR) to have all entries in your EasyPlex Address Book displayed. Also at the "Send To:" prompt, you can type /SEARCH [name] and all Address Book entries with that name will be displayed. After using either of these commands, you can return to the "Send To:" prompt by pressing the Return key. GO EASY

Information USA Adds Feature

Information USA, a comprehensive online guide to the largest source of information — the federal government — has added a feature titled "Free Help for You and Your Family."

This section provides sources of information on subjects such as traveling and buying a home or car. It also includes information of special interest to women, senior citizens and teens. GO IUS

Borland Has New Mac Products

Borland International has announced Turbo Pascal for the Macintosh. In addition, Borland has acquired Interlace, a fully relational database for business applications, enhanced it and introduced the new version as Reflex for the Mac.

Both Turbo Pascal for the Mac and Reflex for the Mac will be supported online in the Borland International Forum. Questions about these products may be addressed to Larry Kraft (sysop) through the forum message board. GO BOR100

HealthNet Adds Eye Care Facts

The HealthNet Reference Library's Ophthalmology/Eye Care section now has a menu of articles dealing with eye surgeries and procedures. Topics include cataracts, glaucoma, surgery for nearsightedness and contact lenses.

Also in the Reference Library, the Sports Medicine section has two new articles about scuba diving. GO HNT

Living Videotext Forum Now Open

The Living Videotext Forum is now available to all CompuServe subscribers. Living Videotext, a premier software developer and publisher of idea processing software, will be providing online support for its products: Ready!, ThinkTank and MORE. The forum staff also will answer questions about idea processing.

Ready! is Living Videotext's memory resident outline processor for the IBM PC. ThinkTank is an expanded version of Ready! for the IBM PC and PC-compatibles, Macintosh and Apple II family. MORE is the newest Living Videotext product for idea processing for the Macintosh. GO LVTFORUM

AI Expert Magazine Available

Two new sources of information on artificial intelligence — *AI Expert* magazine and *AI Expert* Forum — are now available on the CompuServe Information Service.

AI Expert is for people who want to learn how to apply artificial intelligence programming techniques and for those who just have an interest in the topic. The latest developments in artificial intelligence will be reported.

The *AI Expert* Forum will allow subscribers to interact with writers, programmers, readers and visiting artificial intelligence experts. GO AIE, GO AIE100

New Investment Programs Available for IBM PC Users

The Investors' Forum has added a group of investment programs for the IBM PC and compatibles. Following is a list of those programs and a few of the other programs and textfiles that have been uploaded to CompuServe forums recently:

INVESTORS' FORUM
(GO INVFORUM)

Investment Spreadsheet — A spreadsheet for IBM PCs and compatibles. File SPREAD.ARC in Data Library 0.

Portfolio Manager — To help keep track of a stock portfolio. This is a BASIC program for IBM PCs and compatibles. File PORTFO.BAS in Data Library 1.

Portfolio Tracking — A portfolio tracking system for IBM PCs and compatibles. File STRACK.ARC in Data Library 1.

Financial Manager — A program called CashTrac, a personal finance manager, courtesy of the American Association of Individual Investors. Includes a checkbook manager and several other menu-driven programs. File CT515.ARC in Data Library 9.

MACINTOSH USERS GROUP
(GO MACUS)

***Missile* Game** — A game similar to *Missile Command*, complete with rockets, lasers and particle beam weaponry. For the Macintosh. File ASHES.BIN in Data Library 4.

BORLAND INTERNATIONAL FORUM
(GO BOR-100)

Trivia Game — A trivia quiz of about 130 questions written in Turbo Prolog. File TRIVIA.PRO in Data Library 6.

Artificial Intelligence — A transcript of a Borland-sponsored conference on artificial intelligence featuring Borland President Philippe Kahn among others. File AICONF.TXT in Data Library 6.

THE SPACE FORUM
(GO SPACEFORUM)

Space Almanac — A textfile that gives complete information about the US Naval Observatory's newly announced Floppy Almanac, a computer version of the annual astronomical almanac. Includes information for ordering. File ALMANA.TXT in Data Library 7.

THE AMIGA FORUM
(GO AMIGAFORUM)

Las Vegas Keno in AmigaBasic — Play one to 15 spots, play new numbers each game or the same numbers repeatedly. Payoffs shown after each game. File KENO.MSB in Data Library 2.

Simulation Program — A program for the Amiga that does a simulation of planets in orbit around a star. File GRAV.ARC in Data Library 2.

Lunar Game — A version of the classic Lunar Lander for the Amiga. File LANDER.ARC in Data Library 2.

APPLE II/III FORUM
(GO APPLE)

Apple Program — A program for the Apple for those who use a dedicated color television. The program simulates a television technician's color bar generator to enable the user to fine tune the convergence and color adjustments on the monitor. File CBAR.GEN in Data Library 3.

ProDOS — *Lunar Lander* for the Apple. Runs under ProDOS only. File LL.BAS in Data Library 5.

Recovery Program — A program for the Apple II and III that is described as "not perfect, but it gives you a fighting chance to recover erased files." File PRODOS.UND in Data Library 1.

THE COMPUTER CLUB FORUM
(GO CLUB)

Financial Program — A finance utility for the Sanyo computer with functions that include savings growth, growth of regular deposits, dividends and withdrawals, earned interest on savings and a loan calculator. File FINMGT.BAS in Data Library 2.

ATARI 8-BIT FORUM
(GO ATARI8)

Game — A game from the July 1986 *Analog* magazine. File BLAST.XMO in Data Library 1.

Game — A pinball game in which a monster watches you play. File MONSTR.BIN in Data Library 1.

THE HEALTH FORUM
(GO HOM-660)

AIDS Update — A statistical analysis of AIDS cases reported to the Centers for Disease Control, updated monthly. File AIDSST.TXT in Data Library 5.

IBM COMMUNICATIONS FORUM
(GO IBMCOM)

HOST Program — A new version of the popular HOST program for IBM PCs and compatibles. Includes scroll buffer, ANSI cursor positioning and color, the capability to use your editor without leaving HOST and medium- and high-resolution graphics. File HOST20.EXE in Data Library 3.

Transend — A combination communications and data compression program that accelerates document transfers between computers by 45 to 60 percent. File TRANSE.ARC in Data Library 3.

IBM HARDWARE FORUM
(GO IBMHW)

Printer Setup — A menu-driven setup for MS-DOS systems. Contains code for Epson, Gemini, Citizen (MSP-10/15 & MSP-20/25), MPI, Mannesman-Talley, Panasonic and Hewlett-Packard printers. File PSET27.ARC in Data Library 2.

IBM NEW USERS FORUM
(GO IBMNEW)

Pianoman — A series of programs for writing and playing music on IBM PC and compatibles. The files include PNOMAN.ARC, PNOALT.ARC and PLAPNO.ARC. The file called PNOALT.ARC is specifically for IBM compatibles. These files are in Data Library 4.

Extract Utility — Version 3.1 of the fast ARC utility. Faster than the previous version, it will extract files to console or printer. File PXARC.COM in Data Library 2.

IBM SOFTWARE FORUM
(GO IBMSW)

MenuMaster 1.50 — A custom menu utility for automating DOS routines and for running applications programs at the touch of a single key. Allows you to customize screen colors and add your own menu titles. For the IBM PC and compatibles. File MMSTR.ARC in Data Library 3.

Binary and Hexidecimal Math — This file contains a message thread from the forum about binary and hexidecimal numbers and their use in BASIC, assembly and other PC applications. File BINHEX.THD in Data Library 3.

EPSONONLINE
(GO EPSON)

Display Chip Files — A series of 31 files for accessing the 7220 display chip in the Epson QX-10. File EGRAF.LBR in Data Library 0.

Utility — For reading and writing to EPSON QX-10/16 CP/M disks from MS/PC-DOS. File RWCPM.COM in Data Library 0.

TANDY COLOR COMPUTER FORUM
(GO COCO)

Kill the Vampire Game — A BASIC text adventure that will run on Tandy's Color Computer, the TRS-80 Model 3 or the TRS-80 Model 4 in Model 3 mode. The object of the game is to find the vampire and kill it before the time runs out.

David Peyton co-authored How to Get the Most Out of CompuServe. *His CompuServe User ID number is 76703,244.*

SUBJECT INDEX

*** Current as of October 1, 1986.**

The CompuServe Information Service Subject Index provides a list of the communication and information services available online, and it is updated continually. Refer to the most recent index of services online by entering **GO INDEX** at any prompt.

Use the most direct route to reach a service by entering **GO** followed by the Quick Reference Word provided in the index. Enter this command at any online prompt.

Find the services available under a topic of interest by entering **FIND** and the topic at any online prompt. For example, if you would like to see what services are offered concerning travel, enter FIND TRAVEL. You will receive a list of the services related to travel, along with the Quick Reference Words to proceed to each area.

COMPUTING AND TECHNOLOGY — **GO COMPUTERS**

Personal Computing Forums — Hardware

Amiga Forum ... GO AMIGAFORUM
Apple Users Group ... GO MAUG
Apple II and III User Group ... GO APPTWO
Apple User Groups Forum ... GO APPUG
Macintosh Users Forum ... GO MACUS
Macintosh Developers Group ... GO MACDEV
Atari Forums ... GO SIGATARI
Atari 8-Bit Forum ... GO ATARI8
Atari 16-Bit Forum ... GO ATARI16
Atari Developers Forum ... GO ATARIDEV
Commodore Users Network ... GO CBMNET
Amiga Forum ... GO AMIGAFORUM
Commodore Arts and Games Forum ... GO CBMART
Commodore Communications Forum ... GO CBMCOM
Commodore Service Forum ... GO CBM-2000
Commodore Programming Forum ... GO CBMPRG
Computer Club Forum ... GO CLUB
DEC Users Network ... GO DECUNET
DEC PC Forum ... GO DECPC
PDP-11 Forum ... GO PDP11
VAX Forum ... GO VAXSIG
Epson Forum ... GO EPSON
Heath User Group ... GO HEATHUSERS
Hewlett-Packard Series 100 Forum ... GO HP
IBM Users Network ... GO IBMNET
IBM Communications Forum ... GO IBMCOM
IBM Hardware Forum ... GO IBMHW
IBM Junior Forum ... GO IBMJR
IBM New Users Forum ... GO IBMNEW
IBM Software Forum ... GO IBMSW
Kaypro Forum ... GO KAYPRO
OMNI OnLine ... GO OMNI
Orch-90 Computer Music ... GO ORCH90
OS9 Operating System Forum ... GO OS9
Tandy Users Network ... GO TANDYNET
Color Computer Forum ... GO COCO
Fort Worth Computer Chronicles ... GO FWCC
LDOS/TRSDOS 6 Forum ... GO LDOS
Model 100/Portables Forum ... GO M100SIG
OS-9 Forum ... GO OS9
Tandy Corporation Newsletter ... GO TRS
Tandy Professional Forum ... GO TRS80PRO
Texas Instruments Forum ... GO TIFORUM

Personal Computing Forums — Software/Languages

AI Expert Magazine ... GO AIE
Ashton-Tate Forum ... GO ASHTON
Autodesk Forum ... GO ADESK
Borland International Forum ... GO BORLAND
Computer Art ... GO ARTSIG
Computer Club Forum ... GO CLUB
Computer Consultants Forum ... GO CONSULT
Computer Language Magazine ... GO CLM
CP/M User Group ... GO CPMSIG
Digital Research Forum ... GO DRFORUM
Forth Forum ... GO FORTH
LOGO Forum ... GO LOGOFORUM
LOTUS Forum ... GO LOTUS
1-2-3 Software Forum ... GO LOTUS123
Jazz Software Forum ... GO LOTUSJAZZ
Symphony Software Forum ... GO SYMPHONY
LDOS/TRSDOS 6 Forum ... GO LDOS
Living Videotext Forum ... GO LVTFORUM
MicroPro Users Forum ... GO MICROPRO
Microsoft Forum ... GO MSOFT
Pascal Forum ... GO MUSUS
Programmers Forum ... GO PROGSIG
Software Publishing Forum ... GO SPCFORUM
Whole Earth Software Forum ... GO WHOLEEARTH

Electronic Publications and Other Interests

AI Expert Magazine ... GO AIE
ANTIC ONLINE ... GO ANTIC
Apples Online ... GO AOL
COMPUTER LANGUAGE Magazine ... GO CLM
Digital Research Inc. ... GO DRI
Dr. Dobb's Journal ... GO DDJ
DR. JOB ... GO DRJ
FAMILY COMPUTING Magazine Electronic Edition ... GO FAM
Fort Worth Computer Chronicles ... GO FWCC
IQuest — The Online Reference Resource ... GO IQUEST
Microsearch ... GO MSH
OMNI OnLine ... GO OMNI
Online Today ... GO OLT
Software Publishing Online ... GO SPC
Tandy Corporation Newsletter ... GO TRS
Texas Instruments News ... GO TINEWS
The World of LOTUS ... GO LOTUS
Computing Tutorials ... GO PCS-121
Personal File Area ... PER
VIDTEX™ Communication Software ... GO VIDTEX

COMMUNICATION — **GO COMMUNICATE**

CB Simulator (Computer Conferencing) ... GO CB
CB Society ... GO CUP
Directory of Information Service Subscribers ... GO DIRECTORY
EasyPlex Electronic Mail ... GO EASY
National Bulletin Board ... GO BULLETIN

Communication-Related Forums

Citizen's Band Interest Group ... GO CBIG
Color Mail Exchange Forum ... GO HALLMARK
Hallmark Color Mail ... GO COLORMAIL
HamNet Ham Radio Network ... GO HAMNET
Picture Support Forum ... GO PICS
Telecommunications Forum ... GO TELECOM

NEWS, WEATHER, SPORTS — **GO NEWS**

AP Sports Wire ... GO SPORTS
AP Videotex Wire ... GO APV
The Business Wire ... GO TBW
Computer Sports World ... GO CSW
Executive News Service® ... GO ENS
Hollywood Hotline ... GO HOLLYWOOD
IQuest — The Online Reference Resource ... GO IQUEST
ONLINE TODAY Electronic Edition ... GO ONLINE
Sports News ... GO SPORTS
ST. LOUIS POST-DISPATCH ... GO SPD
Weather Reports, Forecasts, Maps ... GO WEATHER

News and Sports Forums

Auto Racing Forum ... GO RACING
Journalism Forum ... GO JFORUM
National Issues and People Forum ... GO ISSUES
OMNI OnLine ... GO OMNI
Online CompuServe Connection ... GO OCC
Outdoors Forum ... GO OUTDOORS
Sailing Forum ... GO SAILING
Sports Forum ... GO HOM-110

TRAVEL SERVICES — **GO TRAVEL**

ABC Worldwide Hotel Guide ... GO ABC
Adventures in Travel ... GO AIT
American Express Travel Services ... GO AXP
Discover Orlando ... GO ORLANDO
Educational Travel Connection ... GO ETC
National Tourism Citilog ... GO CITIES
Official Airline Guide EE ... GO OAG
Pan American Travel Guide ... GO PANAM
Rocky Mountain Connections ... GO ROCKIES
State Department Travel Briefings ... GO STATE
Sun in Sand Vacations ... GO SNS
Travelshopper℠ ... GO TWA
TravelVision ... GO TRV
Vermont Tourism ... GO VERMONT
VISA Advisors ... GO VISA
West Coast Travel ... GO WESTCOAST
What's New in Travel ... GO WNT
WorldWide Exchange ... GO WWX

Travel-Related Forums
Florida Travel ..... GO FLORIDA
Travel ..... GO TRAVSIG

Aviation Services
Aviation Services ..... GO AVIATION
Airline Flight Information ..... GO FLIGHTS
AOPA Forum ..... GO AOPA
Aviation Forum ..... GO AVSIG
Aviation Safety Institute ..... GO ASI
Flight Planning and Weather Briefings ..... GO EMI
Service Difficulty Reports ..... GO ASI
Weather Maps ..... GO MAPS
Weather Reports and Forecasts ..... GO AWX

SHOPPING SERVICES — **GO SHOP**
Comp-u-store OnLine ..... GO CUS
CompuServe's SOFTEX Software Sales ..... GO SOFTEX
CompuServe's Online Product Ordering ..... GO ORDER
New Car Showroom ..... GO NEWCAR
The Electronic Mall™ (selected merchants) ..... GO MALL

Apparel/Accessories
Athlete's Outfitters ..... GO ATH
Apparel Concepts for Men ..... GO APC
Birkenstock Footwear ..... GO BF
Casual Tee's ..... GO CA
International Fur Wholesalers ..... GO RF
Milkins Jewelers ..... GO MJ
Woodstock Leather Co ..... GO BAG

Auto
American Tire Buyers ..... GO ATB
AMS/Oil Dealer ..... GO AMS
Buick Motors ..... GO BU
Chevy Showroom ..... GO CHV

Books
Bantam Books ..... GO BB
The McGraw-Hill Book Company ..... GO MH
Waldenbooks ..... GO WB

Computing
Computer Express ..... GO CE
Conroy-LaPointe ..... GO CL
Discount Computers ..... GO DSC
The Heath Company ..... GO HTH
1-800-FLOPPYS ..... GO DSK
Marymac Industries Inc ..... GO MM
Misco Computer Supplies ..... GO MO
Sears, Roebuck and Co ..... GO SR
Software Discounters of America ..... GO SDA
World of Computers ..... GO WOC

Financial
Beneficial National Bank ..... GO BNB
Colonial National Bank USA ..... GO CN
Equitable Life ..... GO EL
Max Ule Discount Brokerage ..... GO MU
Sun Life Group ..... GO SLG

Gifts/Gourmet
Alaska Teleshopper ..... GO AK
Coffee Emporium ..... GO COF
Fifth Avenue Shopper ..... GO FTH
Florida Fruit Shippers ..... GO FFS
Hawaiian Isle ..... GO HI
Hobbit Hole/Wyandotte Wines ..... GO HH
Lincoln Manor Baskets ..... GO LM
Morrow's Nut House ..... GO NUT
Topgar Tobaccos ..... GO TG
Walter Knoll Florist ..... GO WK

Home/Leisure
Cosmic Concepts ..... GO CC
The Game Getters, Inc ..... GO GG
Music Alley Online ..... GO MAO
Vacuum Advance ..... GO VCS

Merchandise/Electronics
American Airlines Catalog ..... GO AA
Electronic Gadget Store ..... GO EGS
Nationwide Catalog Shopper ..... GO NCS
Sears, Roebuck & Co ..... GO SR
Sunland Camera ..... GO SUN
Xerox Direct Marketing ..... GO XDM

Online Services
Globalink ..... GO GLO
EF Hutton ..... GO EF
NewsNet ..... GO NN
Official Airline Guides ..... GO OA
Videolog ..... GO VL

Periodicals
Dow Jones & Co ..... GO DJ
EBSCO Magazine Entree ..... GO ME
Ecopress ..... GO ECO
USA TODAY ..... GO US

Premium Merchants
American Express ..... GO AXM
Bloomingdale's By Mail ..... GO BL
Neiman-Marcus ..... GO NM
Tiffany & Co ..... GO TIF

Records/Movies
CBS/Fox Video ..... GO CF
Express Music CDs ..... GO EMC
RCA Direct Marketing ..... GO RC
Record World ..... GO RW

Sports/Health
Barracuda Sports Products ..... GO BP
Carolina Health & Fitness ..... GO HF
VitaMenagerie Discount Vitamins ..... GO VM

Travel
Air France ..... GO AF
American Airlines ..... GO AA
Ameropa Travel ..... GO AT
Worldwide Property Guide ..... GO WWX

MONEY MATTERS AND MARKETS — **GO MONEY**
Agricultural Commodity Price & Volume Information Since 1979 ..... GO CPRICE
Banking Services ..... GO BANK
Bond Prices & Volumes Since 1973 ..... GO BONDS
Bond Interest Payments ..... GO BONDS
Brokerage Services ..... GO BROKER
Charts to Analyze Securities Performance ..... GO TREND
Commodity Market News & Analysis from News-A-Tron ..... GO NAT
Commodity Market News & Analysis from AgriCommodities ..... GO ACI
Company Information from Standard & Poor's ..... GO S&P
Company Information from Disclosure II® ..... GO DISCLOSURE
Diamond Information from Rappaport's Diamond Service ..... GO RDC
Downloading Interfaces for Pricing Data ..... GO MQINT
Downloading Interfaces for Company Data ..... GO IQINT

SUBJECT INDEX

Earnings Estimates & Sales Projections from Value Line ... GO EARNINGS
Earnings & Growth Estimates from the I/B/E/S® ... GO IBES
Economic Outlooks from Money Market Services ... GO MMS
Financial Futures Information ... GO COMMODITIES
Financial Statements from Value Line ... GO VLINE
Financial Statements from Disclosure II® ... GO DISCLOSURE
Foreign Currency Exchange Rates Since 1973 ... GO QUOTES
Information USA ... GO IUS
Insurance Information ... GO INSURANCE
Interest Rate Outlooks from Money Market Services ... GO MMS
Market and Industry Index Lookup ... GO INDICATORS
Market & Industry Indexes Since 1973 ... GO QUOTES
MicroQuote II Program Prompt ... GO MQUOTE
Mutual Fund Services ... GO FINANCE
Mutual Fund Distributions ... GO DIVIDENDS
Mutual Funds Net Asset Values & Offered Prices ... GO QUOTES
Mutual Funds — Noload Fund Descriptions ... GO NOLOAD
Options Prices & Volumes for Recent Contracts ... GO OPRICE
Ownership Information from Disclosure/Spectrum® ... GO DISCLOSURE
Portfolio Valuation ... GO PORT
Real Estate Appraisal ... GO REAL ESTATE
Screening — Company Information From Disclosure ... GO COSCREEN
Securities Symbol Lookup ... GO SYMBOLS
Security Screening (on Investment Criteria)® ... GO SCREEN
Stock Prices & Volumes Since 1973 (Multiple Issue) ... GO QSHEET
Stock Prices & Volumes Since 1973 (Single Issue) ... GO PRICES
Stock Quotes for the Current Day (Delayed 20 Minutes) ... GO QQUOTE
Stock Splits & Dividends ... GO DIVIDENDS
Stock Market Highlights ... GO MARKET
Spreadsheet Interfaces for Securities Data ... GO INTERFACES
Tax Information from the Internal Revenue Service ... GO IRS
Tax & Benefit Information from the Social Security Administration ... GO SSA
U.S. Dollar Outlooks from Money Market Services ... GO MMS

Online Banking and Brokerage Services

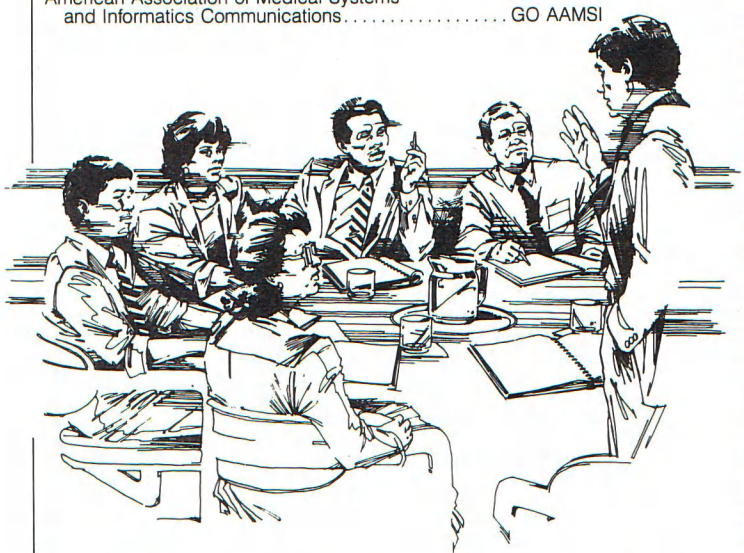
Max Ule & Co. (Brokerage Services through Tickerscreen) ... GO TKR
NCNB National Bank, Charlotte, N.C. ... GO NCB
PSFS, Philadelphia ... GO PSFS
Quick & Reilly (Brokerage Services through Quick Way) ... GO QWK
Rappaport Diamond Brokers ... GO RDC
Shawmut Bank, Boston ... GO SHW
Southeast Bank, Miami, Florida ... GO SEB
Unified Management (Mutual Fund Services from Liquid Green) ... GO UMC
United American Bank, Memphis ... GO UAB
"Business Banking Direct" from PSFS ... GO BBD

Financial and Investment Forums

Ashton-Tate Support Library ... GO ASHTON
Ask Mr. Fed Forum ... GO ASKFED
Financial and Investment Forums ... GO FINFORUMS
Investors ... GO INVFORUM
World of LOTUS (LOTUS 1-2-3, Symphony, Jazz) ... GO LOTUS

BUSINESS MANAGEMENT AND REFERENCE — **GO BUSINESS**

American Association of Medical Systems and Informatics Communications ... GO AAMSI



American College of Obstetricians and Gynecologists ... GO ACOG
American Express® ADVANCE ... GO AXP
Aviation and Flight Planning ... GO AVIATION
AP Videotex, Business ... GO APV
The Business Wire ... GO TBW
Calculate Net Worth ... GO FINANCE
Checkbook Balancer ... GO CHECKBOOK
Communications Industry ... GO MEDIA
Computer Consultants Forum ... GO CONSULT
Executive News Service® ... GO ENS
DR. JOB ... GO DRJ
EdVENT II ... GO EDV
Fedwatch Newsletter ... GO MMS
Independent Insurance Agents Association ... GO INSURANCE
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Reference and Training Forums

Association for the Dev. of Computer-based Instructional Sys. ... GO ADCIS
Disabilities Forum ... GO DISABILITIES
Educational Products Information Exchange ... GO EPIEFORUM
Working From Home ... GO WORK

Industry and Professional Forums

American Association of Medical Systems and Informatics ... GO MEDSIG
Aircraft Owners and Pilots Association ... GO AOPA
Aviation Forum ... GO AVSIG
Broadcast Professional Forum ... GO BPFORUM
Communications Industry ... GO MEDIA
Consumer Electronics Forum ... GO CEFORUM
Computer Consultants Forum ... GO CONSULT
Int'l. Entrepreneurs Network ... GO USEN
Journalism Forum ... GO JFORUM
Legal Forum ... GO LAWSIG
Military Veterans Services ... GO VET
Public Relations and Marketing ... GO PRSIG
Safetynet Forum ... GO SAFETY
Telecommunications ... GO TELECOM
Work From Home ... GO WORK
Writers and Editors ... GO WESIG

HOME, HEALTH & FAMILY — **GO HOME**

Calculate Net Worth ... GO FINANCE
Checkbook Balancer ... GO CHECKBOOK
HealthNet ... GO HNT
Home Management ... GO HOME
Human Sexuality ... GO HSX
Independent Insurance Agents Association ... GO INSURANCE
Information USA ... GO IUS
Internal Revenue Services ... GO IRS
IQuest — The Online Reference Resource ... GO IQUEST
Loan Amortization ... GO FINANCE
Naked Eye Astronomy ... GO NIA
The National Satirist ... GO KCS
New Car Showroom ... GO NEWCAR
OMNI Online ... GO OMNI
Personality Profile ... GO TMC
Rare Disease Database ... GO RDB
Social Security Administration ... GO SSA

General Interest Forums

Aquarium & Tropical Fish ... GO FISHNET
Astronomy Forum ... GO ASTROFORUM
Comic Book Forum ... GO COMIC
Consumer Electronics ... GO CEFORUM
Disabilities Forum ... GO DISABILITIES
Family Computing Forum ... GO FAM
Food/Wine Forums ... GO FOOD
The Gamers' Forum ... GO GAMERS
Good Earth Forum ... GO GOODEARTH
Ham Radio Forum ... GO HAM
Human Sexuality ... GO HSX
Literary Forum ... GO LITFORUM
Music Forum ... GO MUSICFORUM
Model Aviation Forum ... GO MODELNET
National Issues and People Forum ... GO ISSUES
Online CompuServe Connection ... GO OCC
Religion Forum ... GO RELIGION
Science Fiction Forum ... GO SCI-FI

SUBJECT INDEX

Space Forum	GO SPACEFORUM
WITSIG	GO WITSIG
Work From Home	GO WORK

EDUCATION AND REFERENCE — GO EDUCATION

Education

The College Board	GO TCB
Educational Travel Connection	GO ETC
Educational Products Information Exchange (EPIE)	GO EPE
EdVENT II	GO EDV
Handicapped Users' Database	GO HUD
Peterson's College Guides	GO PCG
The Multiple Choice	GO TMC
Touch-Type Tutor	GO TMC
The Whiz Quiz	GO WHIZ
Science Trivia	GO SCITRIVIA
Rehabilitation Database	GO REHAB

Reference

Academic American Encyclopedia	GO ENCYCLOPEDIA
U.S. Government Publications	GO GPO
Information USA	GO IUS
IQuest — The Online Reference Resource	GO IQUEST
Microsearch	GO MSH
SuperSite Demographic Information®	GO SUPERSITE

Education Forums

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Disabilities Forum	GO DISABILITIES
Educational Products Information Exchange Forum	GO EPIEFORUM
Educational Research Forum	GO EDRESEARCH
Educators Forum	GO EDFORUM
Foreign Language Education Forum	GO FLEFO
LOGO Forum	GO LOGOFORUM
Science and Math Education Forum	GO SCIENCE
Students' Forum	GO STUFO
Space Forum	GO SPACEFORUM

ENTERTAINMENT AND GAMES — GO GAMES

Entertainment

Hollywood Hotline	GO HHL
Movie Reviewettes	GO MOVIES
Music Forum	GO MUSICFORUM
Rocknet	GO ROCK
Soap Opera Summaries	GO SOS

ENTERTAINMENT NEWS/INFORMATION — GO EGNEWS

The Gaming Connection	GO GAMCON
Hollywood Hotline	GO HHL
Minutiae Challenge	GO MINUTIAE
Movie Reviewettes	GO MOVIES
National Satirist	GO KCS
RockNet	GO ROCK
Soap Opera Summaries	GO SOS

ENTERTAINMENT/GAMES FORUMS — GO EGFORUMS

CBIG (CB Interest Group)	GO CBIG
Color Mail Exchange Forum	GO HALLMARK
Comic Book Forum	GO COMIC
Consumer Electronics Forum	GO CEFORUM
The Gaming Connection	GO GAMCON
Music Forum	GO MUSICFORUM
Picture Support Forum	GO PICS
RockNet	GO ROCKNET
Sci-Fi Fantasy Forum	GO SCI-FI
WitSIG	GO WITSIG

GAMES FORUMS-INFORMATION — GO GAMCON

The Gaming Connection	GO GAMCON
The Electronic Gamer™	GO EGAMER
The Gamers' Forum	GO GAMERS
Introduction to CompuServe Games	

ADVENTURE GAMES — GO ADVENT

CastleQuest	GO CQUEST
Flying Buffalo	GO BUFFALO
House of Banshi	GO BANSHI
Original Adventure	GO ORADVENT
New Adventure	GO NEWADVENT
Scott Adams Adventure Series	GO ADAMS

BOARD/PARLOR GAMES — GO BPGAMES

Astrological Charting	GO ASTROLOGY
Baffle Word Game	GO BAFFLE
Biorhythm Charting	GO BIORHYTHM
The Casino	GO CASINO
Hangman	GO HANGMAN

FANTASY ROLE-PLAYING GAME — GO FRPGAMES

BlackDragon	GO BLACKDRAGON
Castle Telengard	GO CASTLE
Flying Buffalo	GO BUFFALO
Island of Kesmai	GO ISLAND

MULTI-PLAYER GAMES — GO MULTIGAMES

Air Traffic Controller	GO ATCONTROL
Baffle Word Game	GO BAFFLE
The Casino	GO CASINO
Flying Buffalo	GO BUFFALO
Island of Kesmai	GO ISLAND
MegaWars I	GO MEGA1
MegaWars III	GO MEGA3
SeaWAR	GO SEAWAR
SpaceWAR	GO SPACEWAR
Terrestrial	GO TERRESTRIAL
You Guessed It!	GO YGI!

SIMULATION/SPORTS GAMES — GO SSGAMES

Air Traffic Controller	GO ATCONTROL
Football	GO FOOTBALL
Golf	GO GOLF

TRIVIA/THOUGHT GAMES — GO TTGAMES

Baffle Word Game	GO BAFFLE
Minutiae Challenge	GO MINUTIAE
The Multiple Choice	GO TMC
Science Trivia Quiz	GO SCITRIVIA
SHOWBIZQUIZ	GO SHOWBIZ
The Traveler's Challenge	GO ETC-81
The Whiz Quiz	GO WHIZ
Word Scramble	GO SCRAMBLE
You Guessed It!	GO YGI!

WAR GAMES — GO WARGAMES

Command Decision	GO COMDEC
MegaWars I	GO MEGA1
MegaWars III	GO MEGA3
SeaWAR	GO SEAWAR
Space WAR	GO SPACEWAR
The Multi-Player Games Forum	GO MPGAMES

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Earning High Marks

I/B/E/S Assists Novice, Expert Investors

I/B/E/S, the Institutional Brokers Estimate System database, has recently added online "help" information so individual investors can benefit from studying analysts' earnings expectations for the stocks they wish to investigate.

I/B/E/S provides earnings estimates on more than 3,400 publicly traded corporations, compiling the earnings forecasts of 2,500 securities analysts at 130 brokerage and research firms.

Because the I/B/E/S database had formerly been targeted to the professional investor, "We've added a lot of explanatory material," says Scott Clyde, CompuServe product manager. This includes a new section called "What is I/B/E/S?" which describes the service.

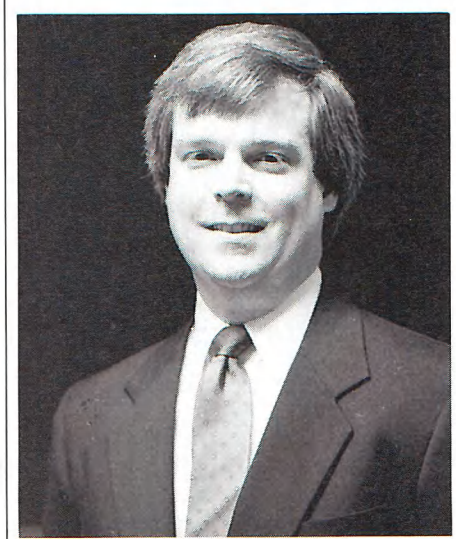
I/B/E/S earnings estimates are grouped by company and by fiscal period to produce average or mean earnings estimates for the current fiscal year and the coming fiscal year. The service also gives the five-year projected average annual growth rate. To display the range of analysts' opinions, the database lists the highest and lowest earnings estimates available.

A second section on "How to Use I/B/E/S" discusses the behavior of earnings estimates and their effect on stock price and then explains how any investor can use I/B/E/S reports. "The Relationship Between Earnings Expectations and Stock Price" explains that earnings expectations and stock price are closely related. It notes that because increasingly accurate information is available as the announcement of a company's actual earnings approaches, more accurate forecasts become available as that report date nears.

This entry also cautions that as expectations for the current year become fully incorporated into stock prices, the current year's earnings become less significant. Stock prices then begin to reflect expectations for the coming year's earnings.

An entry on "Dealing With Your Broker's Recommendations" describes how investors can use I/B/E/S data to quickly determine whether to purchase the recommended stock.

To evaluate a broker's recommendation, it suggests that a user access I/B/E/S, type the ticker symbol for the recommended stock, and retrieve analysts' consensus earnings forecasts. The user then can compare that individual broker's recommendations with general thinking on Wall Street. If a broker's estimates of stock performance is higher than the consensus and if that prediction comes true, an investor stands to earn money. If a broker's estimates are lower than the consensus, however, purchase of the stock doesn't logically follow.



Marketing to novice investors: *Clyde*

An entry on "The Importance of Trends in Consensus Earnings Forecasts" notes that having a better earnings forecast than the consensus is obviously profitable. However, users unsure of the accuracy of a given forecast can instead assess a stock's likely performance by reviewing the trend in changes of analysts' estimates.

Because analysts' forecasts become more accurate as a company's report of actual earnings approaches, the trend in forecasts coupled with the mean estimate will give a better reflection of actual earnings than does the current consensus forecast taken in isolation.

The entry also notes that when analysts raise their forecasts for a given company, it is profitable to identify that trend soon after it occurs.

The I/B/E/S Expanded Earnings Estimates Report provides information on earnings for the current fiscal year, from the past three weeks and from the current week. It also includes information on the number of estimates raised or lowered since each prior period, and on the change in the mean or consensus forecast.

Since month-by-month tracking of forecast changes can be of additional value, the mean estimates for each month can be recorded on a spreadsheet and evaluated.

Additional I/B/E/S "help" information includes a glossary defining all items appearing on I/B/E/S reports.

To access the database, type GO IBES at any prompt on the CompuServe Information Service. I/B/E/S is available to Executive Option subscribers.

— Kathy Baird

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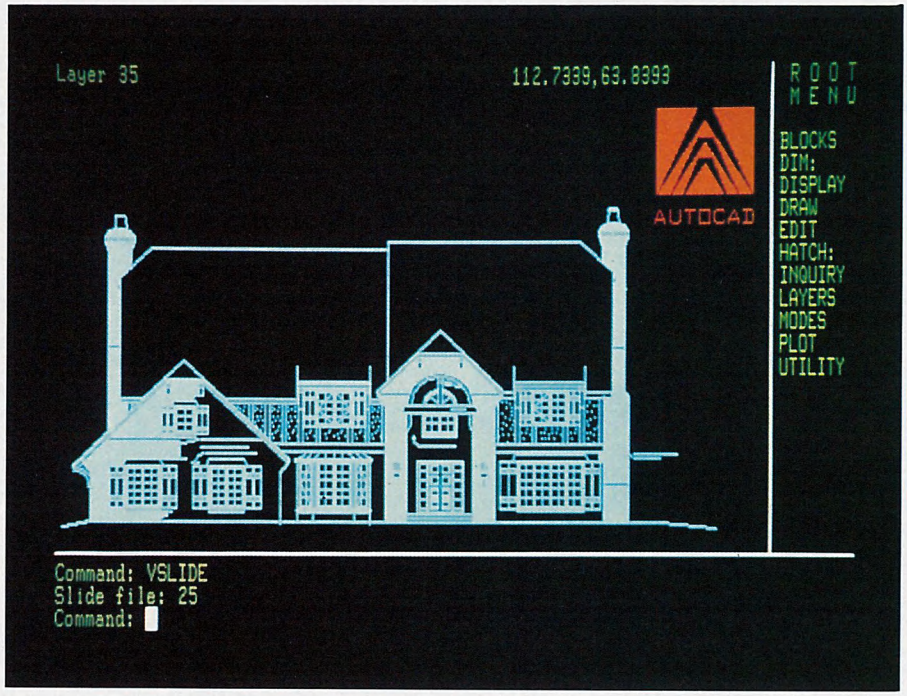

Designing on disk: *Residential elevation image created on AutoCAD*

Autodesk Forum Draws Designer Crowd

If you are among the 60,000 users of AutoCAD computer-aided design software, you may want to take advantage of the information available through the Autodesk Forum (GO ADESK).

Online since April, the forum answers basic questions from new users about AutoCAD, shares tips from experienced users about customized applications, and enables third-party developers of compatible software and peripherals to talk with each other and with users. The forum also offers a bulletin board and extensive data libraries featuring new product descriptions, information on learning materials and training centers, and public-domain software programs.

AutoCAD, available from Autodesk Inc., enables engineers, architects, technical illustrators, educators and designers to create, edit and manipulate drawings on-screen. These drawings can be stored on disk or produced as hard copy using high-quality pen plotters or dot-matrix or laser printers. AutoCAD is available for 31 different types of computers and features an "open system" that encourages development of add-on software and peripherals. Currently, more than 300 add-ons, created primarily by third-party developers, are available through a catalog compiled by Autodesk.

Forum discussions cover not only the different versions of AutoCad but also other company products according to Walt Spevak, marketing manager for special projects at Autodesk. These include AutoCAD AEC, an integrated architectural drafting system, and CAD/camera, a device that translates photographs into drawings.

In its first three months of operation, the Autodesk Forum had more than 2,400 exchanges of messages, Spevak reports.

He and Forum Administrator John Sergneri read all forum messages daily. "Our goal is to answer questions within 24 hours," says Spevak. A problem requiring extensive research is assigned a number and referred to our product support department. They notify the user through the forum when the problem has been resolved."

Spevak suggests first-time forum users attend the regular Wednesday night conferences scheduled for 9 p.m. EST. These lively exchanges, which draw members from around the world, include discussions of new products and applications. Some European members get up at 3 a.m. local time so they can participate in the open-ended conferences, according to Spevak.

— Linda Barr

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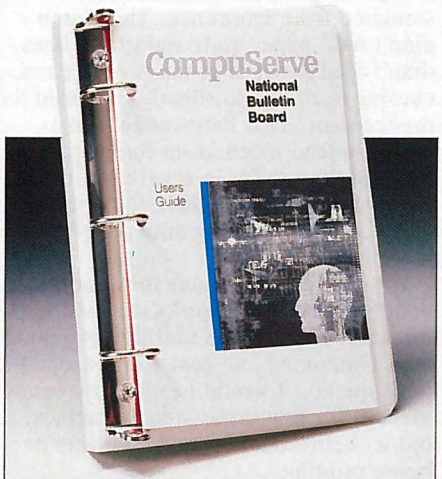

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Business Briefs

SUPERSITE Updates Database

SUPERSITE now includes 1986 updates and 1991 forecasts, replacing 1985 and 1990 figures. These updates and forecasts cover demographic items such as population, number of households, families, age, race and household income. SUPERSITE is available to CompuServe subscribers with the Executive Option.

Expenditures on the Sales Potential Reports now reflect the 1986 figures, as do the population and household numbers on the ACORN Target Marketing Reports. ZIP codes are based on 1986 boundaries. The Neighborhood Report also has been updated with the 1986 and 1991 data. To access the database, type GO SUPERSITE at any prompt in the CompuServe Information Service.

US Treasury Bill Information Available

Street Software Technology Inc. is using CompuServe to disseminate the most accurate and timely information and analysis related to US Treasury Bills and government agency securities to its customers who trade, sell or invest in those markets.

Through the service known as Traders' Spread System, SST Software clients dial into CompuServe and receive a series of menus from which to select the desired analysis or report. More than 100 available programs monitor historical spreads on thousands of issues.

SST, provider of the service, serves major Wall Street securities firms as well as leading banks and investment companies in the United States, the United Kingdom and Japan. For more information, contact CompuServe's Miami branch office.

Program Locates Schools

Families planning to relocate no longer need to rely on hearsay information to select a new school district that is right for them. If their employer subscribes to School Match on the CompuServe Business Information Service, they can obtain an objective report on how school districts in their new location match their personal needs.

A participating family fills out a questionnaire specifying preferences on topics such as commuting distance, pupil/teacher ratio, school building size, school system size, pupil performance on examinations, system awards of excellence, school system expenditures, tax base, special and vocational education programs, property values and per capita income, and educational level of residents. Then, via either CompuServe electronic mail or US mail, they receive a profile report ranking school systems in the new area accordingly.

Based on that information, their house hunt can be narrowed to desirable school districts.

For more information, contact Public Priority Systems Inc., Blendonview Office Park, 5027 Pine Creek Dr., Westerville, OH 43081; 614/890-1573.

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Operating System: As appropriate for computer.
Features: 24-pin printhead with square pins; speeds of 80 characters per second in data processing mode, 40 cps in letter-quality mode and 15 lines per minute in graphics mode; one alternate character set (Spanish); selectable pica, elite, compressed and double-width type styles; graphics resolution of 144 by 144 dots per inch; black or seven-color text printing; unidirectional printing; friction, tractor or roll paper feeding; 8K print buffer.
Options: None.
Model Tested: Standard Okimate 20 with Amiga Plug 'N Print interface, driven by Commodore Amiga running various programs operating under Intuition operating system.
Base Price: $169 plus $99 for Plug 'N Print module.

Reviewed by Cheryl Peterson

Okidata started its line of color printers with the Okimate 10, a good, solid, inexpensive, color printer designed for inexpensive home computers. For the more expensive home and small business computers, Okidata came up with an improved Okimate 20 to meet the demands of higher resolution machines. Yet the Okimate 20 is priced similarly to the Okimate 10 when it was first announced.

This printer succeeds in presenting a good palette of colors by using a dot-matrix thermal printhead and special one-pass color ribbons, while best text quality is obtained from a black ribbon. The square heads on the pins help achieve uniform coverage. The snap-in ribbons are easy to change and don't dirty your fingers. Good for printing about 15 screens each, the ribbons can be bought from Okidata via a toll-free number. No ribbon is needed for thermal paper.

The Okimate 20 is built to handle tractor-fed, single-sheet or roll paper. Smooth surfaced paper with no rag content is recommended, and most copy machine paper meets this specification.

The small unit (13 by 7.5 by 2.25 inches and weighing 6.2 pounds) took about 10 minutes to set up. Although the Okimate manual I received was for the IBM PC version, a special manual included with the interface gave specifics about using the printer with an Amiga. The documentation included plenty of illustrations and sample BASIC programs for accessing the printer's special capabilities, and necessary codes and instructions for creating custom character sets and graphics were outlined. The documentation seemed a little self promotional, with Okidata too quick to blow its own horn, but otherwise the material was satisfactory.

The Okimate 20 offers all standard print functions and print sizes expected of a comparable dot-matrix printer, from expanded to compressed and bold to italic. Correspondence quality is available through either a DIP switch setting or a software switch, but only Spanish characters are offered as an alternative language font.

Speed is one thing this printer doesn't have. In color mode it prints at about 15 lines per minute or four minutes for a normal page. In text mode it is a bit faster at about 80 cps for draft quality or 40 cps for correspondence quality. A built-in 8K buffer helps it retain data if a mechanical problem arises.

The print resolution seemed equal to that on the computer's screen, but colors were a little dark even with the printer's darkness control set at minimum. Part of the difference could be attributed to screens using transmitted light and paper using reflected light.

My one problem with the printer stemmed from ignorance. The platen didn't feed paper quite right, and lines didn't feed forward at the proper pace, causing each line to slightly overprint its predecessor. This happened when I used the feed mechanism to put paper through the printer in reverse. Although the manual warns against doing that, I didn't see the warning until after I made the mistake.

After using the printer for a month, I bought it because it works well and is affordable. For a home unit this is a good buy, combining low cost and reasonable print quality. I would hesitate to recommend it for any professional graphics, but it seems ideal for testing drafts or home printing.

Cheryl Peterson, a free-lance writer from Miami Beach, writes reviews for several computer magazines. Her CompuServe User ID number is 72366.2645.

GO EBB or circle 13 on the Reader Service Form.

Electronic Edition Hardware Reviews

The following hardware reviews are available this month on *Online Today Electronic Edition* by typing GO OLT-220 at any prompt on the CompuServe Information Service.

Fast88, 286 Express Accelerator Cards.
Manufacturers: *Microspeed Inc., and PC Technologies Inc.*
Computers: *IBM PC, PC-XT and many compatibles.*

SixPakPremium Multifunction Card.
Manufacturer: *AST Research Inc.*
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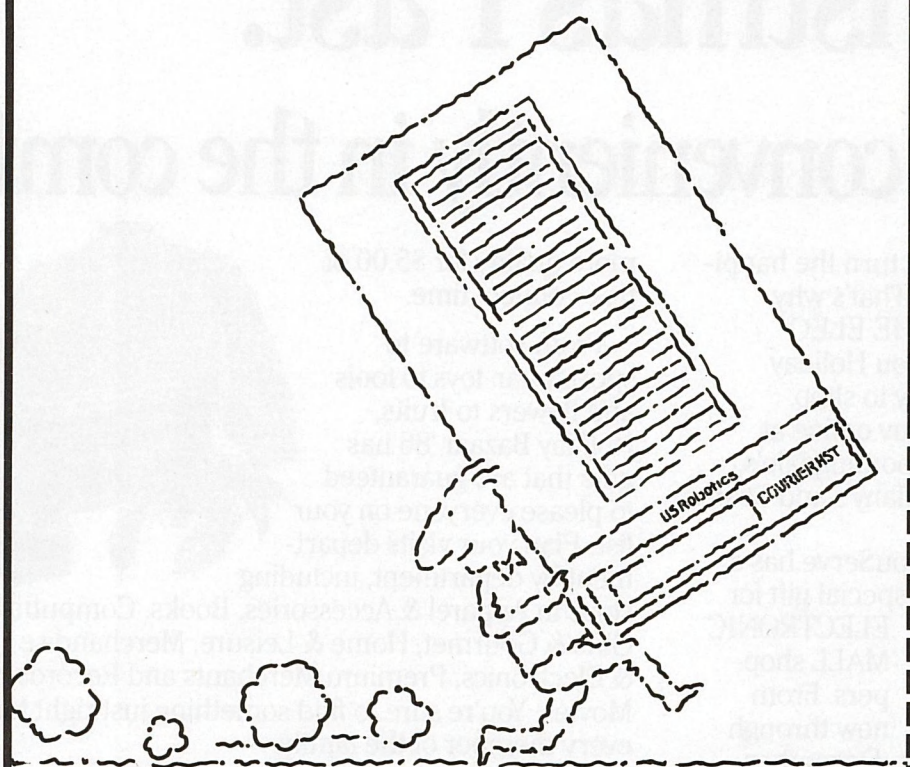

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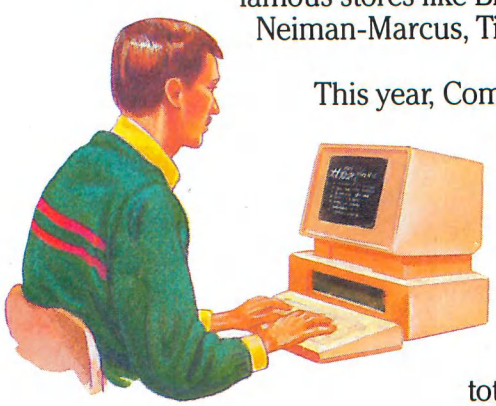

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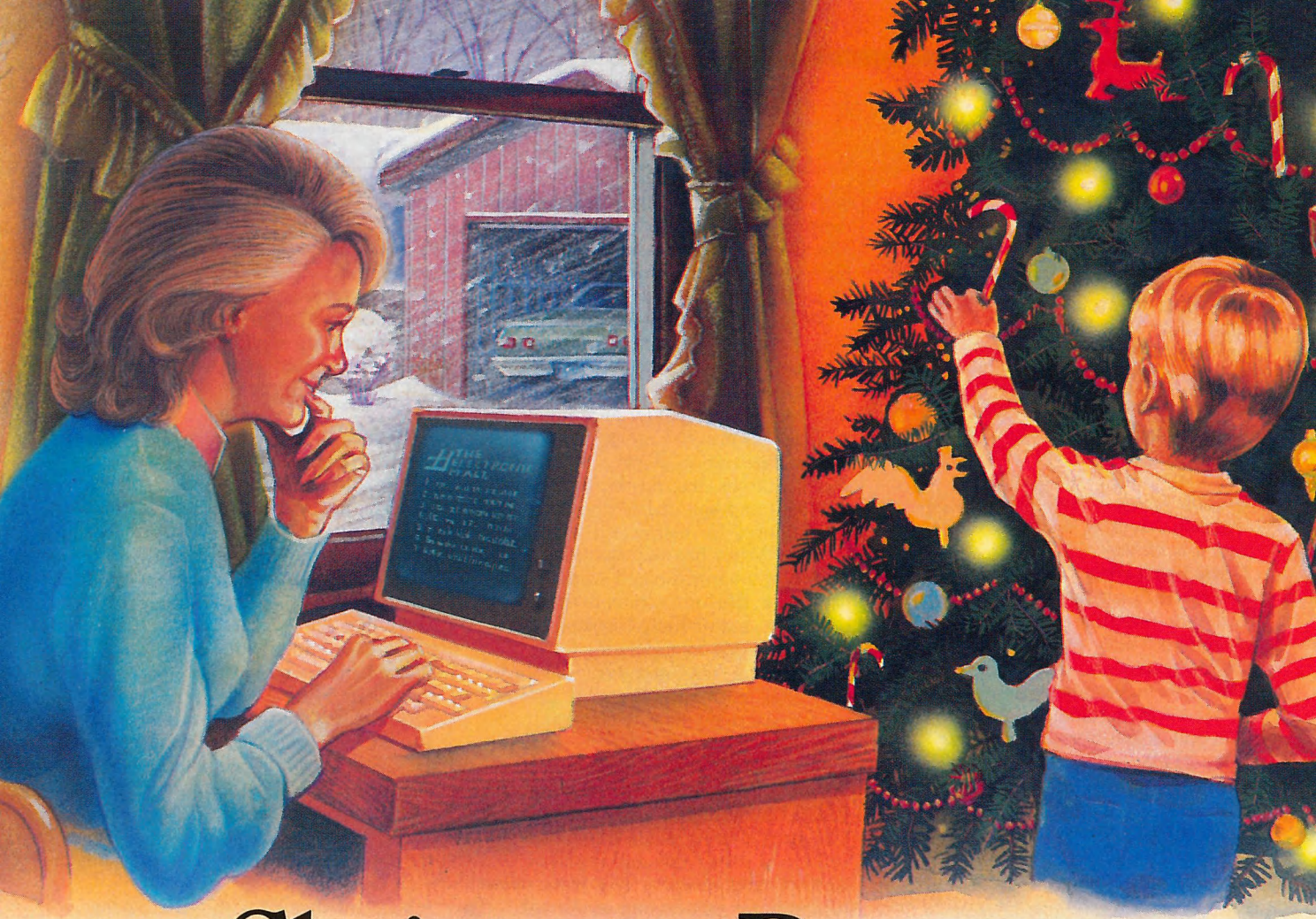

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OfficeWriter & OfficeGraphics

Merge Word Processing and Graphics

Office Solutions Inc.
2802 Coho St.
Madison, WI 53713
608/274-5047 or 800/228-0747

Computers: IBM PC, PC-XT, PC-AT, 3270 PC and 100 percent compatibles.
Operating Systems: PC-DOS or MS-DOS version 2.0 or higher.
Media: Requires two double-sided diskette drives or one diskette drive and a hard disk.
Copy Protection: None.
Required Peripherals: Color or monochrome monitor; graphics capability required only to use OfficeGraphics.
Other Requirements: Minimum 256K RAM; parallel or serial printer (several dozen brands and models supported).
Optional Items: OfficeSpeller/Legal and OfficeSpeller/Medical specialized spell-checking dictionaries.
System used for test: 640K Compaq Deskpro Model 2 with two diskette drives, 20MB IOMEGA Alpha-10 Cartridge Drive Subsystem (Bernoulli Box), Amdek Color 722 RGB monitor, STB Systems EGA Plus video adapter and Epson FX-85 printer; running IBM PC-DOS 2.10.
List Prices: $445 for OfficeWriter (with OfficeSpeller spelling checker); $145 for OfficeGraphics; $95 each for specialized spell-checking dictionaries.

Reviewed by Ernest E. Mau

Never let anyone tell you all word processors are equal. OfficeWriter 4.0 is among the better ones, and except for its spelling checker, it is impressive indeed.

Like other "dedicated" word processors, OfficeWriter makes extensive use of F1 through F10 function keys, alone, shifted and with the Alternate key. The Control key is used with character keys to produce special symbols, not to control operations or tasks. Most commands are issued with a "go" key (large "plus" key) or stopped with a "cancel" key ([SHIFT-F10]). The Escape key is a "help" key. Users coming from another program may find the key layout a little strange at first, but it is learned quickly.

Installation is straightforward. Using a working copy, run the program and select "special functions" from the main menu. These functions control most default settings, including printer management, special symbol assignments, document library management, custom dictionary maintenance and OfficeWriter options.

Other special functions include settings for colors (bold and underline attributes use colors or highlighting), drive setup, default format line and a one to 60-minute interval for automatic saves to disk that prevent accidental work losses. One option displays spaces as either blanks or dots on the screen; I missed it and had distracting dots until I reconfigured for blanks.

OfficeWriter has the functions expected of a sophisticated word processor, plus numerous extras. Word wrapping, automatic paragraph reforming, block manipulations, boilerplating, mail merging, footnoting, columnar math and others are provided. Cursor movement is quick and effective, with single character or line movement, whole word skipping and immediate jumps to ends of sentences, ends of paragraphs, specific pages; etc. The search-and-replace function is versatile and even finds and replaces formatting characters. That is particularly handy for eliminating unwanted "hard" carriage returns from imported ASCII text.

Although OfficeWriter isn't quite a true "as you see it" program because it shows format lines and other special functions intermixed with text, it is difficult to find fault with its entry and editing functions. Virtually everything works smoothly and efficiently. OfficeWriter is memory oriented, keeping an entire document in memory instead of scrolling it to and from disk. Normally, that shouldn't be a problem. On a 640K computer, a 29K document file with 10 single-spaced pages used just 6 percent of available memory.

Among the few things that bother me is the handling of hanging indents, sometimes called "outdents," where a first line is flush against the left margin while remaining lines are indented. Those can be done, but later margin changes require manually repositioning indent codes that must be embedded where the first indented line begins.

Available document conversions move text in either direction between OfficeWriter and ASCII, Wang, DCA or Multimate formats. Another conversion makes an ASCII file into a "secondary document" using either delimited fields or positional fields, which is handy for importing database information. WordStar conversion is being developed.

Converting an OfficeWriter document to ASCII is quick and flawless, easing the job of sending text via modem. However, converting ASCII to OfficeWriter leaves all hard carriage returns in place, so reformatting an imported ASCII file requires manually removing the returns and touching up the physical appearance.

The need to paginate documents as a separate, manually initiated operation can be annoying. Unlike paragraph reforming, pagination isn't automatic. Depending on the number of format lines in a document, repagination can take considerable time. If a document runs out of space, that may not become evident until far into the repagination. A 425K unfootnoted document using 93 percent of available memory correctly repaginated into 139 pages in just a few minutes, but another 419K footnoted and intricately formatted document using 92 percent of available memory locked up my entire computer system after 80 pages and 15 minutes. While it is ill-advised to make documents that large, the potential for wasting large amounts of time does exist.

I wasn't thrilled with OfficeSpeller, the built-in spelling checker. It works, it is quick, and it offers phonetic spelling suggestions. However, it uses the Proximity/Merriam-Webster Linguibase (like Lotus' Symphony Spelling Checker) and has the same problems with varietal spellings I've found objectionable so often before.

This program accepts virtually any word considered a correct spelling by a dictionary, whether a desirable spelling or not. It accepts without question such spellings as "adapter" or "adaptor," "bylaw" or "byelaw," "caliber" or "calibre," "employe" or "employee," "labeled" or "labelled," "leveled" or "levelled," "traveler" or "traveller" and many others. Since there is no way to alter the main dictionary or override varietal spellings, it is of questionable value to those concerned with consistency or bound to specific standards and constraints common in businesses and offices. Many users probably will switch to a third-party spelling checker.

OfficeGraphics 1.0 is a licensed version of Inset from American Programmers Guild. Inset was favorably reviewed in *Online Today Electronic Edition* (June 1986) and is a memory-resident program called at a keystroke to save or "cut" screen images from one program and inset or "paste" them into another. It can capture drawings from

computer-aided design, business graphics, presentation graphics, draw-and-paint and other packages, saving each on disk and later inserting them in OfficeWriter documents at "tagged" locations.

OfficeGraphics can define graphic areas, rotate, size, alter color treatment, set single or double striking, add borders and make other modifications. When pasted into a document, the graphic doesn't appear on screen, but it is printed during normal output. However, OfficeGraphics can display an outline of the area occupied by an image in an OfficeWriter document to adjust and position both text and graphics. Stored images also can be called for viewing and alteration while working in the word processor.

The OfficeGraphics provided was not the latest version of Inset and is intended for CGA not EGA graphics. It can cause problems with EGA cards and some programs. A fully EGA-compatible OfficeGraphics probably will be available before this review is published.

OfficeWriter 4.0 is a good word processor. Given a stricter spelling checker for users with critical requirements plus an upgrade to an EGA graphics capture program, it could become a superior package.

Ernest E. Mau, a full-time free-lance writer and Online Today *reviews editor, is based in Aurora, Colo. He is the author of several books and nearly 300 articles on microcomputer products and applications.*

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Scribble!

Your Way to Amiga Word Processing

Micro-Systems Software Inc.
4301-18 Oak Circle
Boca Raton, FL 33431
305/391-5033 or 800/327-8724

Computers: Commodore Amiga.
Operating System: Intuition.
Media: Supplied on 3.5-inch disk.
Copy Protection: None; backups are encouraged.
Required Peripherals: None.
Optional Items: Color monitor, printer, external disk drive.
System used for test: Commodore Amiga with external disk drive, Commodore 1080 monitor and Epson RX-80 printer.
Retail Price: $99

Reviewed by Cheryl Peterson

While many larger software companies promised word processors for the Amiga, Micro-Systems Software was one of the first to deliver. By mid-1986, Scribble! had been around for almost six months. By promising a free upgrade that would include a spelling checker, the company sought to get their product out as early as possible, and they have managed to deliver a creditable program.

Scribble! uses the Amiga's multitasking capabilities but does not access the fonts provided by the notepad utility. Pull-down menus activate editing functions, and the most frequently used of these also are available as two-keystroke commands.

One interesting note. Two options may be chosen from one menu. One is chosen using each of the mouse's two buttons, with the operations performed in the order chosen.

Convenience commands are available on the 10 function keys, including two help screens, a save and re-edit command, line centering, changeover between edit windows, block-insertion and on/off switching of boldface, underlining and italics. The function keys aren't programmable.

Four windows may be open simultaneously, and text is transferred easily between windows using cut, copy and paste functions. Clicking with the mouse brings a window forward, making it easy to look up references.

A unique option is the ability to choose different color ink and paper for each window, simplifying tracking files in use. These settings are temporary and last only until files are closed.

The mouse controls and scroll gadgets are great for cursor positioning and scrolling. Arrow keys alone and Arrow keys combined with Shift and Alternate keys also move the cursor. For small moves, by character or word, WordStar Control-key functions may be used.

As with any good word processor, Scribble! has both overwrite and insert modes. Not found on a function key, this toggle is switched using a two key combination. Overwrite is the default setting and can't be changed for future sessions.

Search and search-and-replace options are case dependent, so finding occurrences of a capitalized word requires typing it with the capital letters. Therefore, two searches may be necessary to find all occurrences of a word. Changes can be made individually or globally throughout the file.

Dot commands control print and format options, and a widow-prevention dot command prevents stranded lines at the tops or bottoms of pages. One-line headers, footers and their margins are controlled through dot commands. Complete text positioning within these makes it easy to align text at both margins and still center a page number or other text.

No footnoting, indexing or mail merging are provided.

Print control commands may be embedded in text to activate options not provided by built-in commands. While many print functions are accessible using the program's built-in functions, subscripting and superscripting must be accessed using this special method.

Outputs can be sent to printer, screen (preview) or disk. Print-time options include line spacing, number of copies, starting page number and single sheet or tractor-fed paper. A useful option lets printing start at the current cursor location in the file so a printout aborted for some reason can be continued without reprinting previous text.

One peculiarity of Micro-Systems programs involves memory partitioning. The default allocation for Scribble! documents is 64K but can be changed when a file is loaded. Allocated each time a new file is loaded, memory space must be greater than the file size.

Scribble! doesn't create backups, so the user must remember to save the file under a different name to make them. Although not difficult, it is an easily forgotten step.

Error trapping is excellent. Before any fatal action is taken, the program always requests confirmation of the chosen function.

A status option keeps users informed of default settings, memory allocation and file size. An archive function calls up a file directory through which files can be loaded, deleted or saved under the same or different filenames.

The documentation is clear and well-written. Easily held in one hand, it takes little desk space and has both reference and tutorial sections, illustrations and tolerable indexing. In addition, Micro-Systems Software offers user support via telephone, mail, an electronic bulletin board and CompuServe.

While I can think of things that would improve this program, it isn't a bad deal for the price. When the spelling checker is shipped with it, it will be a truly good deal.

Cheryl Peterson, a free-lance writer from Miami Beach, Fla., writes reviews for several computer magazines. Her CompuServe User ID number is 72366.2645.

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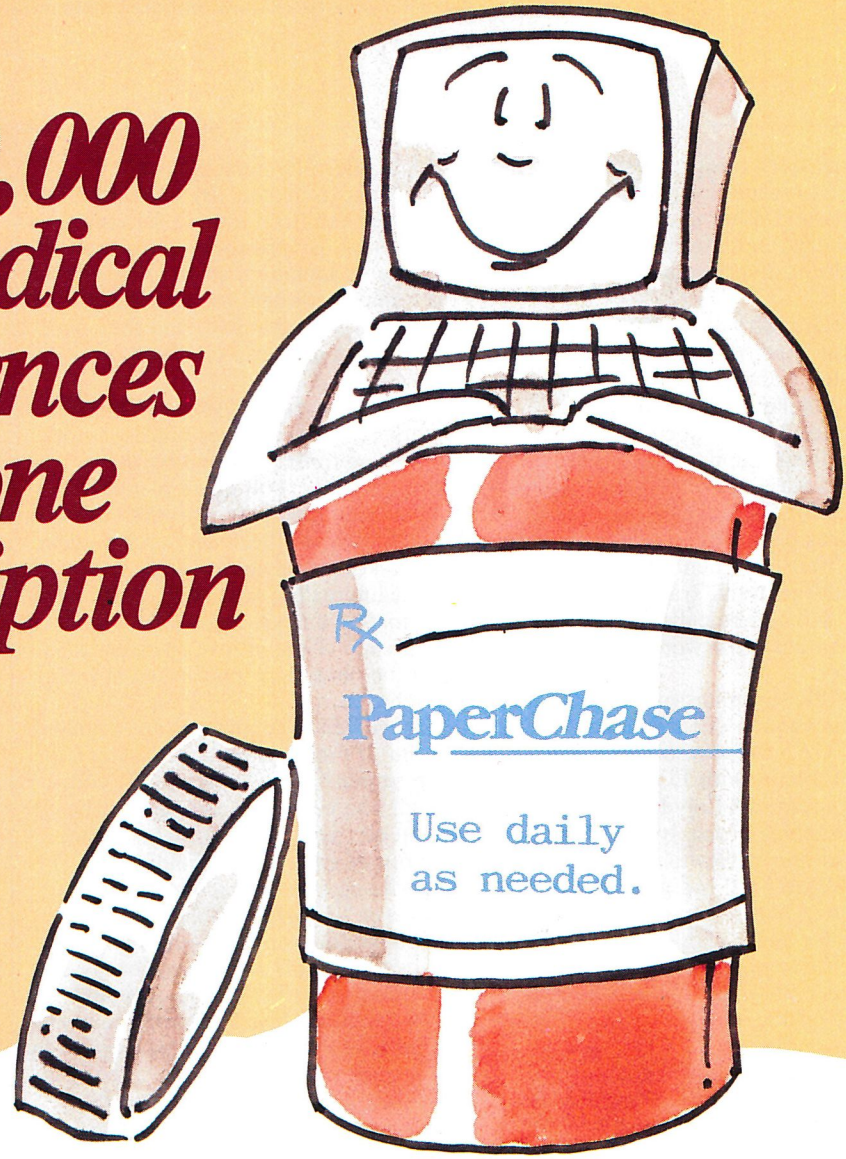

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Media: Requires two 360K diskette drives or one diskette drive and a hard disk.
Copy Protection: None.
Required Peripherals: Hewlett-Packard LaserJet or LaserJet Plus printer.
Other Requirements: Minimum 256K RAM.
Optional Items: Graphics card and monitor.
Systems used for test: (1) 640K IBM PC with one 360K diskette drive, one 20MB hard disk, Hercules Graphics Card, monochrome monitor and Hewlett-Packard LaserJet printer. (2) 640K Compaq Portable Computer with two 360K diskette drives and Hewlett-Packard LaserJet printer.
List Price: $495

Reviewed by Harry Green

Since its introduction about two years ago, the Hewlett-Packard LaserJet has gained wide acceptance. The printer's versatility is impressive, but most word processing software exercises only a few of its functions. Desktop publishing, the buzzword of the mid-1980s, demands software that integrates text and graphics, supports numerous type styles and fonts and includes special characters such as bullets and squares. By comparison, conventional word processors are limited in their text formatting capabilities, particularly when integrating graphics with text.

ScLASERplus exercises all the type styles in LaserJet cartridges or downloaded fonts of the LaserJet Plus. It draws boxes around text and lines of varying thickness across the page. It creates horizontal bar graphs and line graphs with internal commands, and integrates them into text. More exotic graphs such as pie charts are created by the user's favorite graphics program, scanned by a utility program called Snapshot, and embedded in text with a command.

The program includes three files of icons. One contains special characters used in ordinary text. Another contains graphic representations of computer keys enclosed in boxes (invaluable for documenting programs). A third contains stars, pointing fingers, tiny figures used in pictographs and others that add class to printed documents. The program provides for creating icons, but doing so requires a color monitor. Unfortunately, the Hercules Graphics Card is not supported. The icon editor does work on the Compaq Portable Computer, however.

The Snapshot program is impressive. It is memory resident and lets you scan any screen image and copy it to a file with a few keystrokes. The image is recalled with a formatting command embedded in a textfile. This is one tool computer writers will find indispensable once they have used it. It is the easiest way I have seen to get a camera-ready image of any screen with virtually no effort.

The good news about this program is its versatility in producing near-typeset quality output. The bad news is that you must learn a procedural language to access the formatting commands. A command is preceded by a period as the first character on a line in the same manner as in many word processors. For example, the following sequence creates a box that encloses the second line:

```
.begin box
This phrase will be enclosed in a box
.end box
```

Similar commands access characters, margins and other formatting features. Dot commands begin phrases with bullets, number lists of items, generate double columns and access dozens of other such formats that apply to an entire paragraph. Text also is formatted by enclosing characters in brackets. The command "{copyright}" inserts the copyright symbol in text. This method embeds functions inside a paragraph. With these indirect formatting methods, you need experience to visualize an output that is not displayed on screen.

Frequently used formats can be written with a language that resembles Pascal and then stored as macros. The program includes sample formats for letters, memos, reports and tables.

A versatile table-producing feature is provided. A dot command begins the table and provides features to shade rows or columns, set relative column widths and enclose the table in a box with lines between columns. Tables can be imported from spreadsheets that produce ASCII files. ScLASERplus contains a good word processor for creating documents, or documents can be prepared by any word processors producing ASCII output files.

ScLASERplus shifts the LaserJet from high gear to compound low when printing. Following the format command, the program takes a while to initialize the document. Speed varies with the amount of formatting, but a minute or more per page is not unusual. Then printing takes place at a speed considerably slower than LaserJet's vaunted eight pages per minute.

The time needed to format and print a document (often several times to get it right) means that scLASERplus is impractical for ordinary printing. If your word processor output is good enough, you will not want to take the time to use scLASERplus. Yet, for occasional printing jobs that demand near-typeset quality, scLASERplus repays the extra effort it requires. This program is highly recommended for anyone who uses a LaserJet and wants to produce high-quality documents without employing a typesetter.

Harry Green is president of Pacific Netcom Inc., a Portland, Ore., firm that consults with businesses on using office automation and telecommunications to improve productivity. His CompuServe User ID number is 70007,431.

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415/428-1156

Computers: Apple IIe and IIc.
Operating System: ProDOS.
Media: Requires one diskette drive.
Copy Protection: None.
Required Peripherals: None.
Other Requirements: 64K of RAM.
Optional Items: Suitably interfaced printer.
System used for test: 64K Apple IIe with two diskette drives, Apple color monitor and Epson FX-85 printer.
List Price: $37.50

Reviewed by Brian D. Monahan

Date Tickler is a calendar, appointment book and time-management tool. It schedules up to 100 appointments at one time and handles dates to the year 2000. It has the ability to "tickle" or remind the user of an upcoming event a specified number of days before the event.

Date Tickler's packaging is far from elaborate. It comes in a box slightly larger than the floppy disk it includes. The 3- by 4-inch manual contains 52 pages obviously printed directly from text produced by a dot-matrix printer of only average quality. The box cover seems to have been produced with different fonts from the same printer. The manual's cover is illegible in places, but this may not be a problem for the developer because the program is sold principally by mail order. The manual itself is readable and considerably better than it looks. Its tutorial format can be completed in about an hour, making it easy to learn the program.

The actual program also is considerably better than its packaging. Date Tickler is menu-driven and easily used. The first thing most users will do is view or print the calendar for a month. Any month from the current one to December 2000 can be printed. This can be useful; I often want to see a calendar for a month that doesn't appear in my pocket calendar or on the back of my checkbook. Annoyingly, however, the calendar doesn't appear in the conventional form we're used to seeing. Instead, days of the week are listed down the side, not across the top.

The program's most important feature is an option for entering appointments into one of four calendars, specifically today, tomorrow, the day after tomorrow and the future. Appointments must begin with a time stated in 24-hour format (e.g., 14:00 instead of 2:00 p.m.). The user also may enter the number of days notice Date Tickler should provide as a reminder to keep the appointment.

Appointments already entered may be edited, and appointments for a particular day may be entered in any order and then sorted. The program also allows postdating, so a date can be entered as 3/30 + 145.

An ability to search is among Date Tickler's most attractive features. It can search for any keyword in any entry. I can find all entries indicating appointments for dinner with a search for the keyword "dinner." Since appointments are entered in a free format, the program searches entire entries. In my example, it would find "Meet Carol for Dinner" and "Dinner Theater Tickets." Unfortunately, there's no direct relationship between the files for today, tomorrow, the day after tomorrow and the future. Thus, a complete search requires searching all four files separately.

Besides calendar-printing and scheduling capabilities, the program also provides two small databases. Those can be used to organize and store phone numbers, addresses or other useful information. They also can be searched and sorted.

The program suffers from the limitations of the Apple computer on which it runs. Date Tickler does not run "in the background" as similar programs for MS-DOS computers do, so it is necessary to leave the program to run another application. On leaving it, several files are saved, and that is time consuming. Certainly, it is easier to reach into one's pocket for a note pad to jot down "Dinner at Carol's."

Date Tickler is reasonably priced and does what it claims. I found it fun to use. But is it helpful? The answer depends on how diligently the user enters information. Those who are meticulous about entering appointments into a calendar at a central location should find it useful. On the other hand, a system that includes only selected appointments seems worse than no system at all, so those who make most of their appointments "on the go" will find little use for the program.

Date Tickler could be most useful when one individual at a central location is responsible for setting up appointments for several other people.

Brian Monahan is an associate professor of computer science at Iona College in New Rochelle, N.Y.. He teaches undergraduate courses in computer science and graduate courses in Iona's masters program in educational computing.

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Operating Systems: PC-DOS or MS-DOS version 2.0 or higher.
Media: Requires at least one double-sided diskette drive.
Copy Protection: None.
Required Peripherals: Standard IBM-style monochrome or color video display.
Other Requirements: Minimum 128K RAM.
Optional Items: Additional diskette drives or hard disk; IBM Graphics Printer (or compatible).
System used for test: 640K Compaq Deskpro Model 2 with two diskette drives, 20MB IOMEGA Alpha-10 Cartridge Drive Subsystem (Bernoulli Box), Amdek Color 722 RGB monitor, STB Systems EGA Plus video adapter and Epson FX-85 printer in IBM Graphics Printer mode; running IBM PC-DOS 2.10.
List Price: $19.95

Reviewed by Ernest E. Mau

Do you need simple, basic line drawing? Perhaps you need to make an organizational chart but don't have a fancy graphics program or a word processor with its own "draw" functions. If so, Lines Plus might do the job. But if you have any other line and box drawing capabilities, there's a good chance you'll prefer those.

Following the usual Personally Developed Software approach, all documentation for Lines Plus is on disk. The user must run the "G" program to read or print the manual, which contains 60 loosely spaced pages that could have been squeezed into half that length to minimize paper waste. Program installation requires nothing more than copying the distribution diskette to a working diskette or hard disk directory.

Lines Plus is a simple graphic editor that uses only standard IBM characters to construct lines, arrows, boxes, fill patterns and text. It's not much different from the drawing functions now found within many word processors and accomplishes many of the same things. Using the cursor-control keypad, a

"start" cursor is placed at one point and a "mark" cursor at another. Striking other keys then draws a line, box or arrow from the start cursor through the mark cursor.

The program lets the user toggle between single and double lines and make crossing lines either intersecting or overlaying. When overlaid, the lines beneath are broken. When intersecting, all lines are solid. Background fill characters can be selected for boxes but use only standard IBM characters. Since fill characters can only be adjacent to line characters, there's a visual gap between the outline and filling of any box.

Lines drawn with this program may be only vertical or horizontal. There are no diagonals. Put the mark cursor several spaces to one side and above or below the start cursor, and a line with a right angle bend is drawn between them. Furthermore, the character-nature of the program precludes circles, ellipses, curves, freehand sketching and other features of full-blown graphics or "draw-and-paint" programs.

Text can be positioned one letter at a time; as lines beginning, ending or centered at the cursor; within boxes or inside defined area blocks. But there are no elaborate fonts, and all text is written in standard ASCII characters.

There is a convenient facility for marking, remembering and then moving or copying blocks of a drawing from one location to another. There also are provisions for deleting lines or marked blocks, but there's no "undo" feature to reverse the effects of an erroneous command.

Printing with Lines Plus is rather unexciting. The program doesn't offer sizing, selectable printing densities or multiple striking. However, the saved drawings are ASCII files and can be printed with some other programs, including ASCII editors, some word processors and the DOS PRINT command. However, not all word processors can handle the full IBM character set. WordStar doesn't, so it won't print graphics from Lines Plus.

Curiously, the Personally Developed Software catalog points to organizational charts as a specific application for Lines Plus, but the program's tutorial deals strictly with creating a coarse bar chart. Bar charts probably are the last things someone would want to create with Lines Plus since this program cannot draw from numeric data. Making anything more than the crudest business graphics is impractical at best.

I couldn't get excited about Lines Plus. Perhaps someone who's never used another graphics or drawing package would like it, but it's too simple and limited for me. I can't think of any application where I would choose Lines Plus over anything else. Even public-domain programs, free for the cost of downloading, can do as well as Lines Plus.

Ernest E. Mau, a full-time free-lance writer and Online Today *reviews editor, is based in Aurora, Colo. He is the author of several books and nearly 300 articles on microcomputer products and applications.*

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Electronic Edition Software Reviews

The following reviews are available this month on *Online Today Electronic Edition* by typing GO OLT-230 at any prompt on the CompuServe Information Service.

AIMS+PLUS Information Management Software.
Manufacturer: *AIMS+PLUS Inc.*
Computers: *IBM-PC, PC-XT, PC-AT, AT&T PC6300, Compaq and Wang PC.*

Cadpak Mechanical Drawing Software.
Manufacturer: *Abacus Software.*
Computers: *Commodore 64 and 128.*

Modem MGR Apple Communications Software.
Manufacturer: *MGR Software.*
Computers: *Apple II+, IIc and IIe.*

MaxiMite, MaxiMite Plus & DynaMite Telecommunications Software.
Manufacturer: *Mycroft Labs Inc.*
Computers: *IBM PC, PC-XT, and compatibles.*

Personal Choice Software Collection.
Manufacturer: *Activision Inc.*
Computers: *Commodore 64 and 128.*

WordPerfect 4.1 Word Processing Software.
Manufacturer: *WordPerfect Corp.*
Computers: *IBM PC, PC-XT, PC-AT and compatibles.*

Able One Integrated Software.
Manufacturer: *Able International Inc.*
Computers: *IBM PC, PC-XT and compatibles.*

Pro/Sci & Pro/Biz Programmable Calculator Software.
Manufacturer: *Symsoft Inc.*
Computers: *IBM PC, PC-XT and compatibles.*

db_Vista 2.11 Database Programming Software.
Manufacturer: *Raima Corp.*
Computers: IBM PC, PC-XT, PC-AT and compatibles. **Timeslips Time And Billing Software.**
Manufacturer: *North Edge Software Corp.*
Computers: *IBM PC, PC-XT, PC-AT and true compatibles.*

1st-Class Expert Systems Software.
Manufacturer: *Programs In Motion Inc.*
Computers: *IBM PC, PC-XT, PC-AT and true compatibles.*

The Practical Guide to Local Area Networks

By Rowland Archer
Osborne McGraw-Hill, 1986
283 pages, $21.95 (softcover)
Reviewed by Harry Green

It will not be news to CompuServe subscribers that the value of computers is greatly enhanced by linking them through telecommunications. Wide area networks of the type used by CompuServe are essential for long distance communications, but as computers are added to the office it becomes increasingly apparent that a different kind of network is needed.

High speed, short range and privately owned networks are collectively known as local area networks or LANs. Although the objectives of LANs are common, there is a world of difference in the approach among the manufacturers, which leads to the need for a roadmap such as *The Practical Guide.*

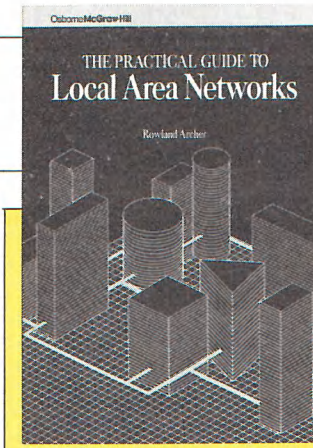
One of the many ways of classifying LANs is to divide them into large-scale networks and personal computer networks (PCNs). The title notwithstanding, *Practical Guide* deals only with the latter type of network. This specialization won't restrict the audience much because PCNs, which began almost as an afterthought, now are becoming the dominant force in the market. IBM's announcement over a year ago of its token ring network, which supports only IBM PCs, has enlivened interest in LAN technology. Unfortunately, *Practical Guide* was written before the token ring announcement so a product that in time will probably dominate the industry is little more than a footnote in this book.

Practical Guide is a consumer's report on PCNs. The first half of the book explains the principal considerations in selecting a LAN, and the second half describes the author's experience in evaluating five different products. The book doesn't explain much about LAN technology, so if you want details on how different access methods work, this book will probably leave you vaguely dissatisfied.

If you are already acquainted with the alternatives, you'll find a wealth of information in this book on how to apply a PCN. The author describes the principal factors to consider in selecting from the abundance of products. If you are planning one of the five PCNs described in the book — IBM PC Network, 3Com EtherSeries, Corvus Omninet, Novell NetWare or Orchid PCnet — this book will be invaluable.

Archer obtained a sample of each of the five products and evaluated them as to architecture, ease of installation, ease of use, adequacy of documentation and performance. He recorded the results of benchmark tests on each product to show differences in the time required to access and write files. Only two personal computers were used in the tests, however, so you can't assume you'll achieve equivalent results with a larger network. The most useful aspect of this half of the book is to give insights into the difficulties you can expect in applying one of these networks.

Although the size of the networks included in Archer's tests limits the validity of the report in some respects, it is a quick way of obtaining comparative data that will be valuable if you're considering a PCN. I recommend that anyone acquiring or installing a PCN read this book. It won't tell you everything you need to know, but it will help you avoid some of the pitfalls of this technology.



Networks: *A consumer's report*

Harry Green is a free-lance writer from Portland, Ore. He is author of Automating Your Office *and* Local Area Networks. *A forthcoming book,* Handbook of Telecommunications, *will be published by Dow Jones-Irwin in 1985. His CompuServe User ID number is 70007,431.*

The Complete Macintosh Sourcebook

By Doug Clapp and Pat Ryall
Info Books, 1986
378 pages, $24.95 (softcover)
Reviewed by Joe Farace

I have mixed emotions about this book. I enjoy reading Doug Clapp's work, and thought his earlier book, *Macintosh!*, was great. This one, unfortunately, is marred by facts beyond Clapp's control.

In January 1986, Apple introduced the Macintosh Plus along with the Hierarchical File System (HFS). Since then, the "enhanced" Mac 512 also was introduced. None of the information about these products and their impact on software and hardware is included in *The Complete Macintosh Sourcebook.* That is the bad news.

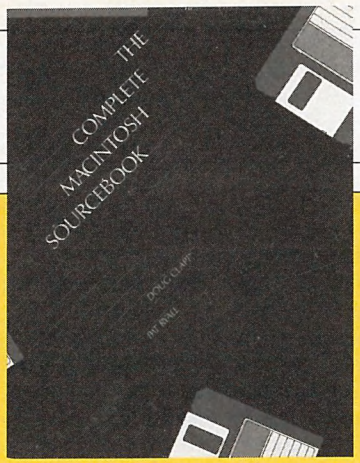
This is not to say that all of the information that is included is useless, it is just somewhat dated. The good news is that the authors have filled the pages of the book with solid information and informed opinions on hardware, software and other products that will enhance both the productivity and fun of using your non-HFS Macintosh. The book's design is good, and it is fun to browse.

The *Sourcebook* is divided into six basic sections: applications software, communications, hardware, publications, software development (really Programming) and public domain. CompuServe subscribers should note that there are only 17 pages of information on communications software and hardware. Maybe that is enough to cover the subject, but I would have guessed there could have been more. Also, *Online Today* isn't listed in the publications section, although other computer magazines are.

The *Sourcebook* contains lots of handy appendixes, including one that lists and describes the then-current contents of CompuServe's MAUG data libraries. *The Complete Macintosh Sourcebook* tries to stay current by having a section called "Up and Comers," which includes products and services that arrived too late to be integrated into the rest of the book. By the way, this section starts on page 367 not page 320, as listed in the table of contents.

If I quibble, it is only because this impressive volume calls itself *complete*, and it is expensive. The publishers have tried to make it up to us by including an "opportunity sheet" in the back of the book. This form promises that respondents will receive two free copies of a Macintosh programming journal and information on updates to the *Sourcebook*. I mailed it immediately upon receiving the book, and after two months received only the programming journal. It was well produced — on a Mac — and was full of information. Unfortunately, it was the June 1985 issue and, like the *Sourcebook* itself, was devoid of information on the current production Macintoshes.

The Complete Macintosh Sourcebook is a close call. I applaud the effort that



Productivity tips: *Advice for Mac users*

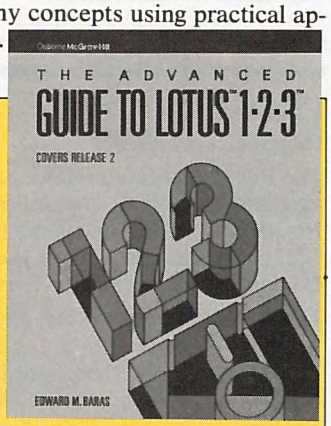
went into producing the book and the style with which it is written. I only wish it was more current. Maybe the next release. . . .

Joe Farace is a writer and photographer from Denver. He is a contributing editor of PhotoMethods *magazine and his reviews of Macintosh software will appear in an upcoming book from Arrays Inc.*

The Advanced Guide to Lotus 1-2-3

By Edward M. Baras
Osborne/McGraw-Hill, 1986
260 pages, $18.95 (softcover)
Reviewed by Darrow Kirkpatrick

The Advanced Guide to Lotus 1-2-3 is for 1-2-3 experts or those who want to be. Edward Baras has written a guide to the most powerful facility of Lotus 1-2-3 — its macro command language. The book covers the advanced features added to Release 2 of 1-2-3 and illustrates many concepts using practical applications.



Macro power: *Guide to Lotus 1-2-3*

Baras assumes that you are familiar with 1-2-3's spreadsheet, database and graphics. The first two chapters build on this knowledge to introduce keystroke macros, which are combinations of 1-2-3 commands, executed with a single keystroke.

Next, *The Advanced Guide to Lotus 1-2-3* explores the 1-2-3 command language, which enhances macros with loops, logical tests, branching, user input and subroutines. The book gives the syntax for the advanced macro statements, then puts them to work in a procedure that generates financial reports. There is a useful note on how to document macros so they will be easier to read and modify.

The book explains the 1-2-3 menu facility, which allows you to associate macro-driven menu options with your own control-panel commands. There is an extensive example that shows how to create a printer set-up utility, plus instructions for making macros like this available in multiple worksheets.

Baras devotes a full chapter to a keystroke recorder built around the GET statement. This essential utility records your keystrokes while you work with 1-2-3, then lets you play them back as a macro.

The later chapters of the book deal with using 1-2-3 to manipulate ASCII text in worksheets and disk files. Baras discusses the Data-Parse command for converting rows of text into columns of labels and values. 1-2-3 includes a set of file commands that give it many of the abilities of a full programming language. The book discusses how to use these commands to work with files at the byte or line level.

The final chapter covers macros that attempt to overcome some of 1-2-3's limitations as a word processor. Baras presents a macro that makes extended text entry more efficient by redefining the Tab and Return keys. Later he extends this macro to provide a crude form of word-wrap, although this version executes slowly. The book ends by explaining the use of Release 2's new string functions to combine data and text, for example by merging worksheet values with a form letter.

The Advanced Guide to Lotus 1-2-3 is clearly written with useful examples of advanced 1-2-3 programming. An appendix lists the many differences between Releases 1A and 2. Two command cards summarize the syntax for 1-2-3 functions and list the full set of macro command keywords. The book goes astray in talking down to the reader occasionally and in attempts to force 1-2-3 past its limits as a spreadsheet/database. But this guide will be useful to anyone interested in developing the full power of the Lotus macro language.

Darrow Kirkpatrick is an independent computer consultant and technical writer living in Rosendale, N.Y.

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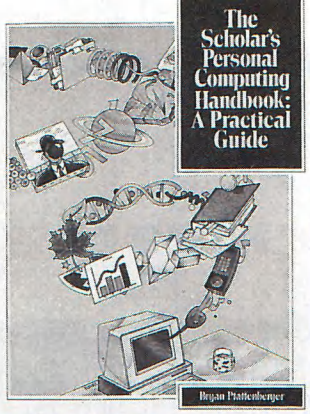

Addressing scholars: *Overdue book*

The Scholar's Personal Computing Handbook:

A Practical Guide

By Bryan Pfaffenberger
Little, Brown, 1986
359 pages, $15.95 (softcover)
Reviewed by Sharon Weizenbaum

Bryan Pfaffenberger's latest book is aimed at the world of scholarly computing. Broadly defining the scholar as "anyone who researches a literature, forms conclusions about it and teaches or writes about those conclusions," he offers aid in the application of computer hardware and software to specific scholarly tasks. Such a book is long overdue and fills the gap left by the multitude of business-oriented handbooks.

After an introduction, the book is divided into four sections devoted to writing, managing information, communicating and number crunching, followed by excellent appendixes and a glossary. Detailed resource notes are placed at the end of each chapter.

The information contained in the chapters on scholarly writing is particularly valuable to anyone engaged in research or writing. What's wrong with idea processing, Pfaffenberger suggests, is that it doesn't recognize that writing is recursive and that writers move back and forth between the planning and writing stage. He presents strategies for making the best use of both word- and idea-processing software.

Chapters on information management are complex. The reader is taken through an "associative trail" of interest and learns, somewhat painstakingly, the efficient methodology for categorizing research notes and records. A complete analysis of database management software is included here, as well as material on bibliographic data management.

Spreadsheet applications for scholarly work are explained by use of examples from the religious studies area, where ethnic group participation statistics are analyzed. The author presents a spreadsheet approach to grading with standardized test scores. He cautions the teacher that, like all statistical tools, the grade-crunching system can be potentially misleading. Using a T-score scale has its limitations. He warns the grader to pay close attention to borderline cases.

A section on communications introduces online database services of interest to scholars. As in other areas, the reader is warned of the disadvantages as well as the advantages of the bibliographic databases. The value of the "serendipity factor" — the high probability of random discovery while browsing — is emphasized. Browsing the more expensive databases is costly and might better be done in a library, according to Pfaffenberger.

The author notes that many scholars' computer needs have been ignored by salespeople and vendors, who have expertise to share with the business user, but are ignorant of the requirements of scholarly research and writing. This handbook has been written as an attempt to help. It succeeds.

Sharon Weizenbaum is an attorney and labor-management arbitrator living in Tucson. Her CompuServe User ID number is 71555,1075.

The Illustrated Dictionary of Microcomputers

Second Edition

By Michael Hordeski
TAB Professional and Reference Books, 1986
352 pages, $14.95 (softcover)
Reviewed by Margaret Morabito

Have you ever looked up a computer term in your dictionary only to find that it is not there? Growing numbers of computer-related words are creeping into our daily vocabulary, but traditional reference books often are not adequate for learning these new words.

The Illustrated Dictionary of Microcomputers (Second Edition), one of the newest releases of computer reference material, holds about 8,000 entries covering software, hardware, theories, languages and other technological material related to computers. The definitions average about five lines or 50 words in length. Acronyms are included, as well as several hundred drawings to illustrate the terms.

The book purports to break the technical language barrier. If you rely heavily on technical manuals or work in the computer, electrical engineering or electronics fields, you may not be daunted by the book's phraseology. However, the average personal computer user will likely need another dictionary to decipher some of the definitions.

The most difficult claims to uphold in this type of book are to be current and comprehensive. The book does have up-to-date albeit hard-to-understand definitions. However, the personal computer market has not been included as much as it should be. For example, I could not find recent terms associated with such graphics-oriented personal computers as the Amiga and the Atari ST. "Bit blitter," "windows" and even "high resolution graphics" are not included in this book. Some of the terms associated with computers and music, such as "MIDI" and "synthesizer," are not covered. "CD-ROM" also is left out. A reason for these and other omissions might simply be that the author did not intend the book for the personal computerist but rather for the professional.

A reference book such as this cannot be all things to all people. *The Illustrated Dictionary of Microcomputers* is a worthwhile reference book. It will help in your efforts to understand computer/electronics terminology on a professional or academic level.

If you are an average personal computer user, you will not need to understand most of the terms in this book and might do better with a less technically worded reference book.

Margaret Morabito lives in Rindge, N.H., and is technical editor of Run magazine.

Electronic Edition Book Reviews

The following book reviews are available this month on *Online Today Electronic Edition* by typing GO OLT-240 at any prompt on the CompuServe Information Service.

The Power of Lotus 1-2-3, *Management Information Source Inc.*
The IBM PC (and Compatibles) Free Software Catalog and Directory, *by Robert A. Froehlich, Dilithium Press*
Turbo Pascal for BASIC Programmers, *by Paul Garrison, Que Corp.*
Advanced dBASE III Programming and Techniques, *by Miriam Liskin, Osborne/McGraw-Hill*
The Creative PrintMaster: Graphic Design Tips for Computer Users, *by Kendra R. Bonnett, International Publishing and Computer Services*

Move-It

Move-It communications software from Woolf Software Systems Inc. has been upgraded to include the ability to transfer files from one computer to another regardless of operating systems or disk size.

Version 4 also includes such features as the ability to download; access information utilities, such as CompuServe; automatic; file compression; keyboard macros; scripting files; XMODEM protocol support and more. Retail price for Move-It, which operates on the IBM PC,PC-XT, PC-AT or compatibles, is $150.

For information, contact Woolf Software Systems Inc., 6754 Eton Ave., Canoga Park, CA 91303; 818/703-8112.

GO EBB or circle 23 on the Reader Service Form.

Cruising the Freeway

PC/Freeway from SoftCorp Inc. is an interactive data communications program for novice and experienced users.

Retailing for $99, the program lets users connect their IBM PC to remote electronic devices, including CompuServe, or to other PCs. The interactive feature turns the PC into an instant bulletin board and is convenient for brief messages users want to convey without breaking the data communications link.

For information, contact SoftCorp Inc., 2340 State Rd. 580, Suite 244, Clearwater, FL 33575; 813/799-3984.

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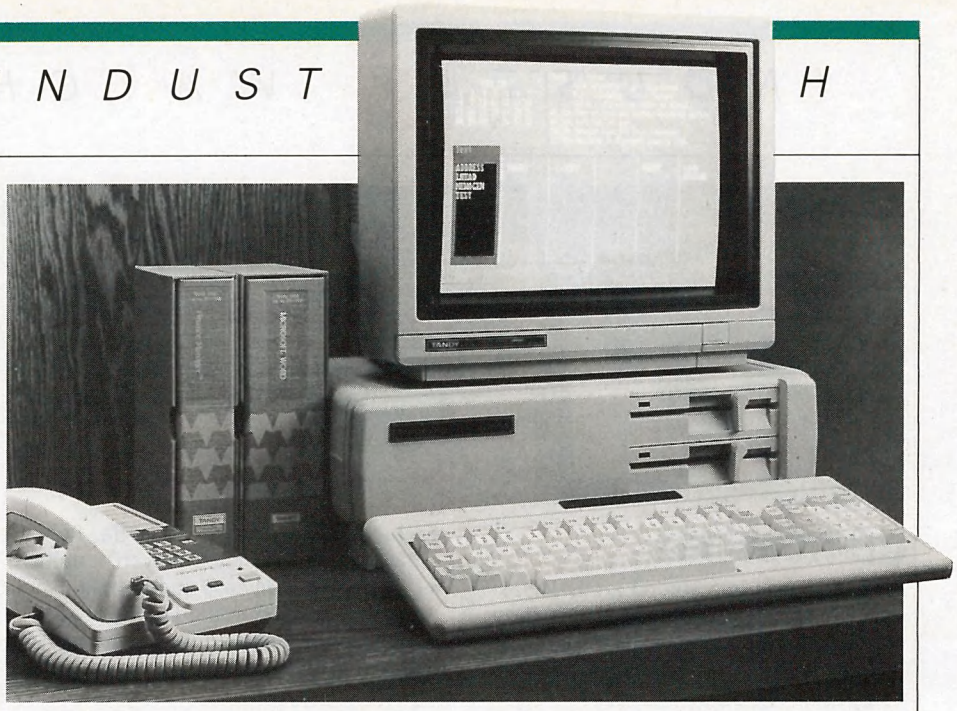
Reverse Protocol Conversion

In what might be called protocol conversion in reverse, TSF (or Terminal Simulation Facility) from Trax Softworks Inc. makes public databases and networks, such as CompuServe, and electronic mail accessible through 3270 terminals.

Instead of putting an ASCII machine in communication with the mainframe database, TSF goes the other way. Users may scroll back and forth through as many as 10 pages while online with a remote system.

For information, contact Trax Softworks Inc., 10801 National Blvd., Los Angeles, CA 90064-4126; 313/475-8729.

GO EBB or circle 25 on the Reader Service Form.



Tandy PC-Compatible

Tandy Corp. has introduced the Tandy 1000 SX computer, a PC-compatible business computer priced at $1,199 that runs 50 percent faster than the IBM PC.

The Intel 8088 microprocessor-based system runs most MS-DOS software. Features include two disk drives, more memory and more expansion slots than the original Tandy 1000 computer. The 1000 SX comes with DeskMate II software, a six-in-one applications package.

For information, contact your local Radio Shack Store or Radio Shack Computer Center.

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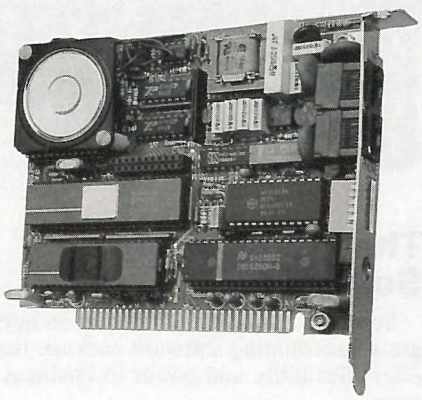

Leading Edge Modem

Leading Edge has introduced a Hayes-compatible 2400 baud modem priced at $289.

Designed for the IBM PC, PC-XT, PC-AT and compatible computers, the modem is an addition to the "L" series of Leading Edge modems and features COM1 through COM4 addressability, auto-dialing and auto-answering and is compatible with most communication software packages.

For information, contact Leading Edge Hardware Products Inc., 225 Turnpike St., Canton, MA 02021; 617/828-8150.

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Conversion Board

Control Electronics Inc. has introduced two PC-XT/AT MS-DOS multiuser conversion boards called the MultiSerial-4 and MultiSerial-8.

Compatible with MultiLink or Unix-based systems, the boards add multiuser capabilities to IBM PC family of computers and compatibles through the use of fully wired 25-pin RS-232 asynchronous serial ports. Each port can support either a modem or a terminal and is fully programmable for start bits, stop bits, parity bits and baud rate. Retail price is $259 for the MultiSerial-4 and $359 for the MultiSerial-8 board.

For information contact Control Electronics Inc., 37450 Enterprise Ct., Farmington Hills, MI 48018; 313/553-3400.

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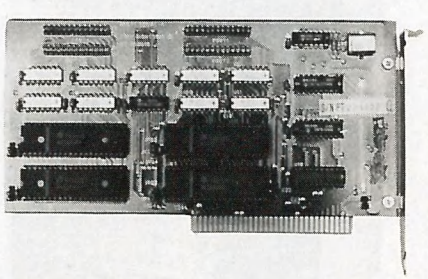

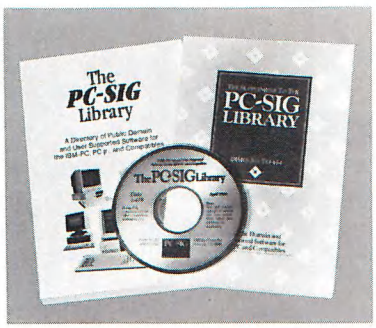

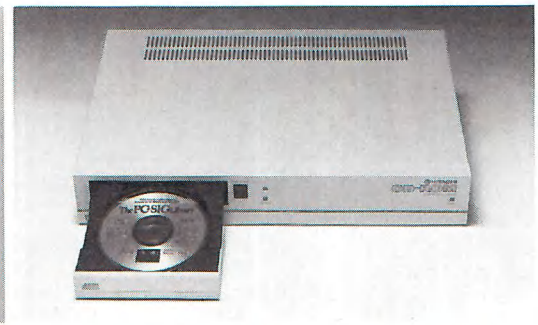

CD-ROM Disk

PC-SIG has introduced a CD-ROM optical laser-read disk containing thousands of easily accessible computer programs for the IBM PC and compatible computers for $195.

The CD-ROM disk, which runs on a laser drive, holds approximately 9,290 software programs that would fill 490 disks if purchased separately. Programs included are PC-Write, PC-File, PC-Calc, Home Finance Analyst, a number of Lotus 1-2-3 macros and templates and a variety of accounting packages. In addition, many public domain and user-supported data communications packages are included.

For information, contact PC-SIG Inc., 1030-D E. Duane Ave., Sunnyvale, CA 94086; 408/730-9291.

GO EBB or circle 30 on the Reader Service Form.

Be Productive

Abacus Software has released three productivity software packages for the Commodore 128.

SpeedTerm 128 is a flexible, command-driven terminal software package that supports XMODEM and Punter file transfer protocols as well as most modems. TAS-128 is an enhanced version of the technical analysis system for stock market charting. New features include macro capabilities, automatic and unattended logon and fast draw charts. PPM-128 is an upgraded version of the Personal Portfolio Manager for tracking the performance of stocks, bonds or options. All three retail for $59.95.

For information, contact Abacus Software, 2201 Kalamazoo S.E., P.O. Box 7211, Grand Rapids, MI 49510. 616/241-5510.

GO EBB or circle 31 on the Reader Service Form.

Partner for the C-128

Partner 128 from Timeworks Inc. is a 128K, 80-column, cartridge-based desktop accessory program for the Commodore 128 computer.

Partner 128 plugs into the back of the computer, giving the user eight convenient, memory-resident desktop accessories that operate concurrently with other Commodore 128 programs. These include an appointment calendar and data book, memo pad, phone list and auto dialer, name and address list, calculator, typewriter, label maker and envelope addresser, and screen print. Retail price is $69.95.

For information, contact Timeworks Inc., 444 Lake Cook Rd., Deerfield, IL 60015; 312/948-9200.

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The Wisdom of Solomon

Solomon III from TLB Inc. is an integrated accounting software package that offers flexibility and power to business users.

Designed for the IBM PC, PC-XT, PC-AT and compatibles, Solomon III features various modules, including general ledger, accounts receivable, accounts payable, payroll, order entry/invoicing, inventory, purchasing, job costing, fixed assets, address and mailing list management, sales analysis and database reporter. Prices range from $395 to $1,395 per module, depending on user requirements.

For information, contact TLB Inc., Great Valley Corporate Center, 267 Great Valley Parkway, Malvern, PA 19355; 215/644-3344.

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Hard Disk Backup

DSBackup (version 2.4) from Design Software is a powerful new hard disk software utility designed to quickly backup and restore files from an IBM PC, PC-XT, PC-AT or compatible computer, MS-DOS computers and the Macintosh and MacPlus.

Selling for $69.95 ($99.95 for Macintosh versions), the utility is completely menu- or command-driven. Users can quickly backup single files, single directories, multiple directories or an entire hard disk drive. It also is capable of backing up to any DOS device, including a Bernoulli Box.

For information, contact Design Software, 1275 W. Roosevelt Rd., West Chicago, IL 60185; 800/231-3088 or 312/231-4540 (in Illinois, Alaska or Hawaii).

GO EBB or circle 33 on the Reader Service Form.

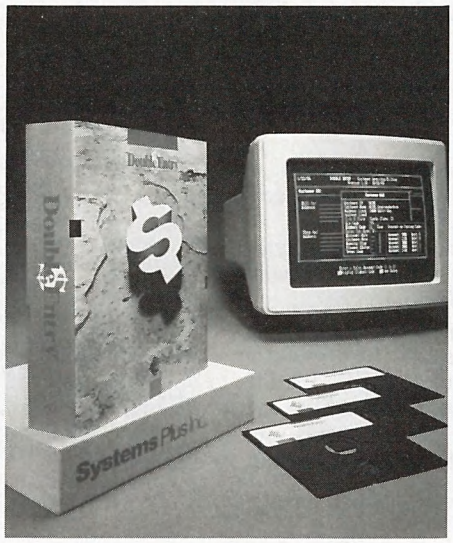
Double Entry

Systems Plus Inc. has introduced Double Entry, a full-featured and completely integrated eight-module accounting software package.

Modules available include general ledger, accounts receivable, accounts payable and inventory. Designed for the IBM PC family and compatible computers, the program requires 256K RAM and a 132-column printer. The complete set is priced at $1,495 with individual modules selling for $595.

For information, contact Systems Plus Inc., 500 Clyde Ave., Mountain View, CA 94043. 415/969-7047.

GO EBB or circle 34 on the Reader Service Form.



Epson Color Printer

Epson America has introduced the EX-1000, an economical, full-featured printer with a draft speed of 300 characters per second.

Features include an easy-to-use typeface selection panel and a color option that make it well-suited for printing spreadsheets, business graphics, engineering applications and other documents requiring wide paper. Retail price is $995.

For information, contact Epson America, Computer Products Division, 2780 Lomita Blvd., Torrance, CA 90505; 800/421-5426 (nationwide) or 213/539-9140 (in California).

GO EBB or circle 38 on the Reader Service Form.

Get It In-Synch

In-Synch from American Video teleconferencing Corp. is an IBM PC teleconferencing utility.

The program is a RAM-resident, pop-up utility that allows two users of an IBM PC, PC-XT, PC-AT or compatibles linked by industry standard modems over ordinary telephone lines to share and manipulate data in real-time. In-Synch, which sells for $149.95, also works with all popular PC-based word processing, spreadsheet and database management software.

For information, contact American Video Teleconferencing Corp., 110 Bi-County Blvd., Farmingdale, NY 11735; 516/420-8080.

GO EBB or circle 35 on the Reader Service Form.

Bank Street Writer Plus

Broderbund Software has introduced an enhanced version of Bank Street Writer for the IBM PC called Bank Street Writer Plus.

The new program includes a spelling corrector with a 60,000 word dictionary, an online thesaurus, hard disk compatibility, a faster editor and pull-down menus. It also allows more experienced users to create single-key commands to skip over often used functions and prompts. Retail price is $99.95. Owners of the original version can upgrade their program for $30.

For information, contact Broderbund Software Inc., 17 Paul Dr., San Rafael, CA 94903-2101; 415/479-1170.

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Electronic Edition Product Announcements

The following new product announcements are available this month on *Online Today Electronic Edition* by typing GO OLT-250 at any prompt on the CompuServe Information Service.

IBM PC XT Model 286, *IBM Corp.*

Multi-Lingual Scribe (Version 3.0), *multi-language word processing program for the IBM PC or compatible, Gamma Productions Inc.*

The Laser Quill, *desktop publishing/word processing package for the Apple Macintosh, Firebird Licensees Inc.*

The Vault, *hard disk drive for the Commodore 64 and 128, Progressive Peripherals & Software Inc.*

FullPaint, *graphics program for the Apple Macintosh, Ann Arbor Softworks Inc.*

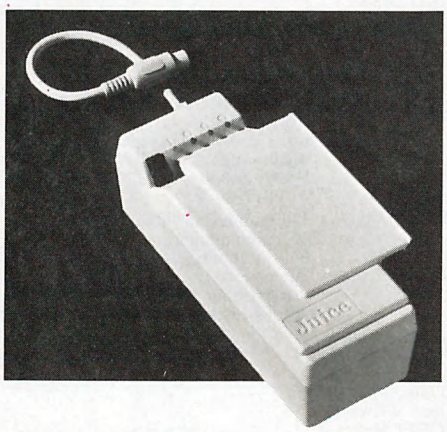
Serial Printer Interface for Commodore Computers, *Omnitronix Inc.*

Thinking Cap, *outline processor for the Commodore 64 and 128, Broderbund Software.*

Pagebuilder, *desktop publishing program for the IBM PC, White Sciences Inc.*

Exchequer, *checkbook balancing and reconciliation package for MS-DOS and CP/M-80 computers, Mycroft Labs Inc.*

SmartWriter 80+, *laser printer, QMS Inc.*



Juice Battery

The new Juice battery-based uninterruptible power supply from Orbic Controls is designed to protect Apple IIc computers from loss of data in memory due to power interruptions or surges.

Juice also converts the IIc into a completely portable computer with about two hours of operating time on a single full charge of the Juice battery. The unit weighs three pounds, comes ready to use and installs easily. It is the smallest one made for the Apple IIc and the only one designed to mechanically connect to the computer's case. Retail price is $169.95.

For information, contact Orbic Controls, 7853 Balboa Ave., San Diego, CA 92111. 800/433-4221 (nationwide) or 206/488-8621 (in Washington and Alaska).

GO EBB or circle 37 on the Reader Service Form.

SHOPPER'S GUIDE

RATES & INFORMATION

If you have hardware, software or services to offer *Online Today*'s readers, let them know with a low cost Shopper's Guide listing.

For only $85, a listing will tell *Online Today*'s growing readership what is available to improve efficiency, lower costs and increase the enjoyment of personal computing.

Listings are classified in four categories: Software, Services, Consultants and Retailers. As each listing is received, it will be published in the next available issue of *Online Today*.

Each listing costs $85. This covers the general listing information as well as a 40-word description of the product or service. Additional words are $15 for up to 15 words. Listings that run for three or more consecutive issues earn a 10 percent discount. Payment *must* be received with listing information.

The following is a guide to the type of information to include in a listing:

Software:
Product name; author and/or company's name; mailing address; telephone number; CompuServe User ID number; up to 40 words describing your products.

Services:
Type of service; company name; mailing address; telephone number; CompuServe User ID number; up to 40 words describing your services.

Consultants:
Company and individual contact name; mailing address; telephone number; CompuServe User ID number; up to 40 words describing your products and services.

Retailers:
Company name; individual contact name; mailing address; telephone number; CompuServe User ID number; up to 40 words describing your products and services.

You may use the enclosed card when ordering your ad or mail your information with payment to *Online Today* Shopper's Guide, P.O. Box 639, Columbus, Ohio 43216-0639.

SOFTWARE

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213/541-4504

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322 Haymarket Pl.
Gahanna, OH 43230
614/475-3315 after 5:00 p.m.
CompuServe 74126,3522

The PROBABILITY Lottery program. Select numbers weighted towards the most or least picked in the past drawings, or totally random. Any number lottery, pick 3&4 too. See national reviews in Rainbow (Oct. 85), Computer Shopper (Jan. 86) and PCM (May 86) magazines. MS-DOS IBM AT&T Tandy 1000 and CP/M $29.95, TRS-80 CoCo and Model 3/4 $19.95.

RACE/FOOTBALL HANDICAPPING
Software Exchange
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W. Bloomfield, MI 48033
313/626-7208
CompuServe 70215,460

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GENERAL

QUICK-START GUIDE FOR 12 TOP PC PROGRAMS
En Route Books
P.O. Box 48407
Phoenix, AZ 85075
800/221-6086 (USA)
800/843-3485 (Ariz.)

Save! Get extensive, easy-to-follow instructions for Lotus®, WordStar®, dBASE III®, Word Perfect®, Microsoft Word®, Multimate®, SuperCalc®, Multiplan®, PFS:Write/Plan/File® and Flight Simulator plus MS DOS® — in one well-designed, clearly-written volume. $19.95+$4 S/H. VISA/MCAmex.

CONSULTANTS

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759 S. State St., #125-B
Ukiah, CA 95482
CompuServe 72105,1363

ORGANIZE YOUR HARD DISK. Tired of wading through confusing manuals? Step-by-step instructions show you how to manage your hard disk. Begin immediately with our MS-DOS help system and library of batch files. On 5¼" disk. $12.50 PP. Free information sheet.

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SERVICES

HUMAN SEXUALITY (Online Magazine and Support Groups) (Howard) Get candid advice. (Martha) Talk about emotions. (Howard) GO HSX on CompuServe.

Feedback we receive: (Bill, 29) This support group is the best thing going. I have never before felt more comfortable communicating in any Forum. Keep up the great work, folks! . . . (Tim, 18) Great service!!! Can't wait for next edition! . . . (Pete, 28) I'm amazed by the range and number of questions and answers that have appeared on this service. You work to fight ignorance and misunderstanding, and the detail of your replies proves you do it well. . . . (Betty, 29) Thanks for the "Birth Control Guide." I learned so much about all the different choices, and was able to come to a good decision. . . . (Jerry, 28) I'm really glad I found you. Your Support Groups are a true compassionate community.

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CompuServe 73307,3426

The addcard unit updates your IBM PC system by adding 4 card slots to the existing 5 slot motherboard, providing 8 slots total. Accepts boards like turbo, memory, disk controllers, modems, cga, others. Only $79 plus $3 P&H. VISA/MC/check.

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130 brand new videotex terminals featuring membrane keyboard with built-in modem, auto-dial and auto-logon. Easy to access any database using regular TV set. Retail $249 — Our special discount price $129.

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5¼" head cleaning kit **H-KA**... $4.95 each
DC300XL-KA data cartridge ... $17.95 ea.
Minimum order 100 diskettes/10 cartridges

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5¼" SSSD Soft Sector w/Hub Ring Retail 10 pack	**6431-KA**	0.44
5¼" Same as above, but bulk pack w/o envelope	**6437-KA**	0.29
5¼" SSDD Soft Sector w/Hub Ring Retail 10 pack	**6481-KA**	0.48
5¼" Same as above, but bulk pack w/o envelope	**6487-KA**	0.33
5¼" DSDD Soft Sector w/Hub Ring Retail 10 pack	**6491-KA**	0.52
5¼" Same as above, but bulk pack w/o envelope	**6497-KA**	0.37
5¼" DSHD for IBM PC/AT - bulk pack	**6667-KA**	1.29
3½" SSHD (135 TPI) - bulk pack	**6317-KA**	1.09
3½" DSHD (135 TPI) - bulk pack	**6327-KA**	1.24
5¼" Tyvek® diskette envelopes - 100 pack	**CV5-KA**	10.00

SSSD = Single Sided Single Density; SSDD = Single Sided Double Density; DSDD = Double Sided Double Density; DSQD = Double Sided Quad Density; SSHD = Single Sided High Density; DSHD = Double Sided High Density.

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To get the fastest delivery of your diskettes, phone your order directly to our order desk and charge it to your credit card. Written purchase orders are accepted from approved government agencies and most well rated firms at a 10% surcharge for net 10 billing. For maximum savings, your order should be prepaid. All sales are subject to availability, acceptance and verification. All sales are final. All prices are in U.S. dollars. Prices, terms and specifications are subject to change without notice. No rainchecks on out of stock items. Not responsible for typographical errors. A $5.00 additional handling fee will be charged for all orders with a merchandise total under $50.00. All shipments are F.O.B. CEI warehouse in Ann Arbor, Michigan. No COD's. Non-certified checks require 3 weeks bank clearance. Michigan residents add 4% sales tax or supply your tax ID number and reason for tax exemption.

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Contacting the Editors

If you have a question or comment about editorial material appearing in *Online Today* magazine, you may write to:

Letters to the Editor
Online Today Magazine
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Columbus, OH 43220

You also may send editorial comments through the Editors' Feedback section of *Online Today Electronic Edition* (GO OLT-30 on the CompuServe Information Service).

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If you need back issues, please send a letter stating the issue date(s) with a check for $2 per copy, which includes postage and handling.

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31	Abacus Software	58
21	Allegory & Co.	52
3	American Express	3
35	American Video	59
7	Atari	19
36	Broderbund	59
8	CACI/Instant Demographics	23
39	Communications Electronics	61
11	CompuServe	42
28	Control Electronics	57
33	Design Software	58
38	Epson America	59
15	Graham Software Corp.	51
5	Grolier Electronic Publishing	7
6	IQuest	10
27	Leading Edge Products	57
12	Max Ule & Company	43
16	Max Ule & Company	51
18	Micro-Systems Software	49
1	NewsNet	Cover 2
17	Office Solutions	48
40	Official Airline Guide	Cover 3
13	Okidata	44
37	Orbic Controls	59
20	PaperChase	50
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22	Personally Developed Software	52
9	Quick & Reilly Inc.	33
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26	Radio Shack	57
24	SoftCorp Inc.	57
34	Systems Plus	59
4	The Electronic University	5
29	Timeworks Inc.	58
32	TLB Inc.	58
25	Trax Software	57
10	Unified Management	41
41	Universal Data Systems	Cover 4
14	US Robotics	45
23	Woolf Software	57

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For free information on products or services in this issue of *Online Today*, fill in your name, address, ZIP code and phone number. Then circle the number that corresponds to the number of the advertisement or article in which you are interested.

CompuServe subscribers can request information electronically by entering GO EBB at any prompt.

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Mail to: Online Today, Reader Service Management Dept., P.O. Box 376, Dalton, MA 01227-0376.

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1	21	41	61	81
2	22	42	62	82
3	23	43	63	83
4	24	44	64	84
5	25	45	65	85
6	26	46	66	86
7	27	47	67	87
8	28	48	68	88
9	29	49	69	89
10	30	50	70	90
11	31	51	71	91
12	32	52	72	92
13	33	53	73	93
14	34	54	74	94
15	35	55	75	95
16	36	56	76	96
17	37	57	77	97
18	38	58	78	98
19	39	59	79	99
20	40	60	80	100

December issue, not valid after March 1987.

EasyPlex:
Electronic Mail Made Easy

The life's blood of an information service is its electronic mail. After all, electronic mail is the epitome of what computer communications is all about — instant links with other people anywhere in the world.

EasyPlex, CompuServe's electronic mail system seems to be at the same time sophisticated and easy to use. Not only does it make it easier to send original messages and replies, but it also has a powerful utility in the form of an online "address book" for storing the names and User ID numbers of frequent correspondents.

Recently EasyPlex was enhanced to enable:

- Quick searching of the address book
- Correspondence with people through MCI Mail
- Access to EasyPlex from inside any of CompuServe's forums

In this column, we will look at how to use these newest features of EasyPlex.

First, a little background on the address book, a feature that is worth your time to explore. The address book can hold up to 50 names and "addresses" of other CompuServe or InfoPlex MCI, subscribers.

When sending a message, you need enter only the name of the recipient and the system will search for the User ID number in the book. In addition, you can put your own name in the address book so that you won't be prompted for the "From:" information each time you send a message.

To start or add to the book, select the Address Book option from the EasyPlex main menu, (or enter the command ADDRESS at the EasyPlex prompt) and select the Insert option. The system then will ask you the name and User ID number of the correspondent.

Now for the improvement: Users found the address book handy, but noticed they sometimes forgot how they entered a name in the book — was it first and last name? Just last name? Just first name? Well, now it is possible to look up entries from the "Send To:" prompt of EasyPlex, using either of two new commands.

From the "Send To:" prompt, you can enter /DIR to get a directory of all entries in the address book. Or you can enter /SEARCH followed by a name, and the address book will be searched for all entries that meet the specification. Suppose you have several Bobs in your book — Bob Johnson, Bob Thomas, Bobby Smith, etc. With /SEA BOB, all of them will be displayed, so that you can specify the Bob of the moment.

After using either command, a carriage return will get you back to the EasyPlex "Send to:" where you can enter the name you intend as the recipient.

Another refinement to EasyPlex is that we can now use it to correspond with users of MCI Mail. This is an important step because this is the first time that two major systems have linked their electronic mail systems, extending the reach of both. The EasyPlex/MCI Mail interconnection enables more than a half million people to communicate with each other electronically.

To send a letter to an MCI subscriber, you need to know only the recipient's MCI Mail ID number or full name as it is registered in MCI's directory. (Note that the ID number is a surer way to get the mail through, since there may be several MCI users with similar names — Charles Bowen, Charles E. Bowen, C.E. Bowen, and Chas. Bowen, for instance.)

Armed with that information, all you have to do at the "Send To:" prompt of EasyPlex is type MCIMAIL: followed by either the MCI User ID or registered name. Like any other EasyPlex message, you are limited to 8,000 characters and line lengths of 80 characters or less.

When you enter an MCI or InfoPlex address into your EasyPlex Address Book, you must precede your entry with a ")" to let EasyPlex know that the address is on a remote electronic mail system. In addition, "MCIMAIL" and the subscriber's MCI ID number must be separated by a ":". So this is what the entry should look like: Send to (name or User ID):)MCIMAIL:XXXXX

By the way, unlike a single EasyPlex message between CompuServe users, there is a surcharge for sending messages to MCI Mail subscribers. At present, it costs 45 cents for messages under 500 characters and $1 for longer letters, but, of course, rates are subject to change. To check on the latest costs for that, type GO TRANSACTION.

The most exciting enhancement to EasyPlex is that it now is available to us from any of the forums online. To use it, select the Leave Message option from a forum function menu (or just type L at the Function prompt). At the subsequent "To:", type the User ID number of the recipient. After filling in the subsequent "Subject:" prompt, write the message as you usually do and close it. That will produce the "Leave action" prompt or menu. At this point, simply type MA (for mail).

This also will work in replying to messages in the forum. If you would rather reply in a private EasyPlex than in a public message on the forum board, just select the REply option following the forum message, write your message and then, at the Leave Action prompt, type MA.

The only thing to remember in sending an EasyPlex from the forums is that the "To:" prompt must be supplied with a valid User ID number for the recipient. The mail cannot be delivered unless there is a User ID number in the "To:" field.

You can stay up-to-date on the latest enhancements in EasyPlex by checking into the mail newsletter from time to time. To do that, access EasyPlex (GO MAIL or GO EASY will do it) and at the main prompt, type the command NEW.

Charles Bowen is a contributing editor of Online Today. *His CompuServe User ID number is 70007,411.*

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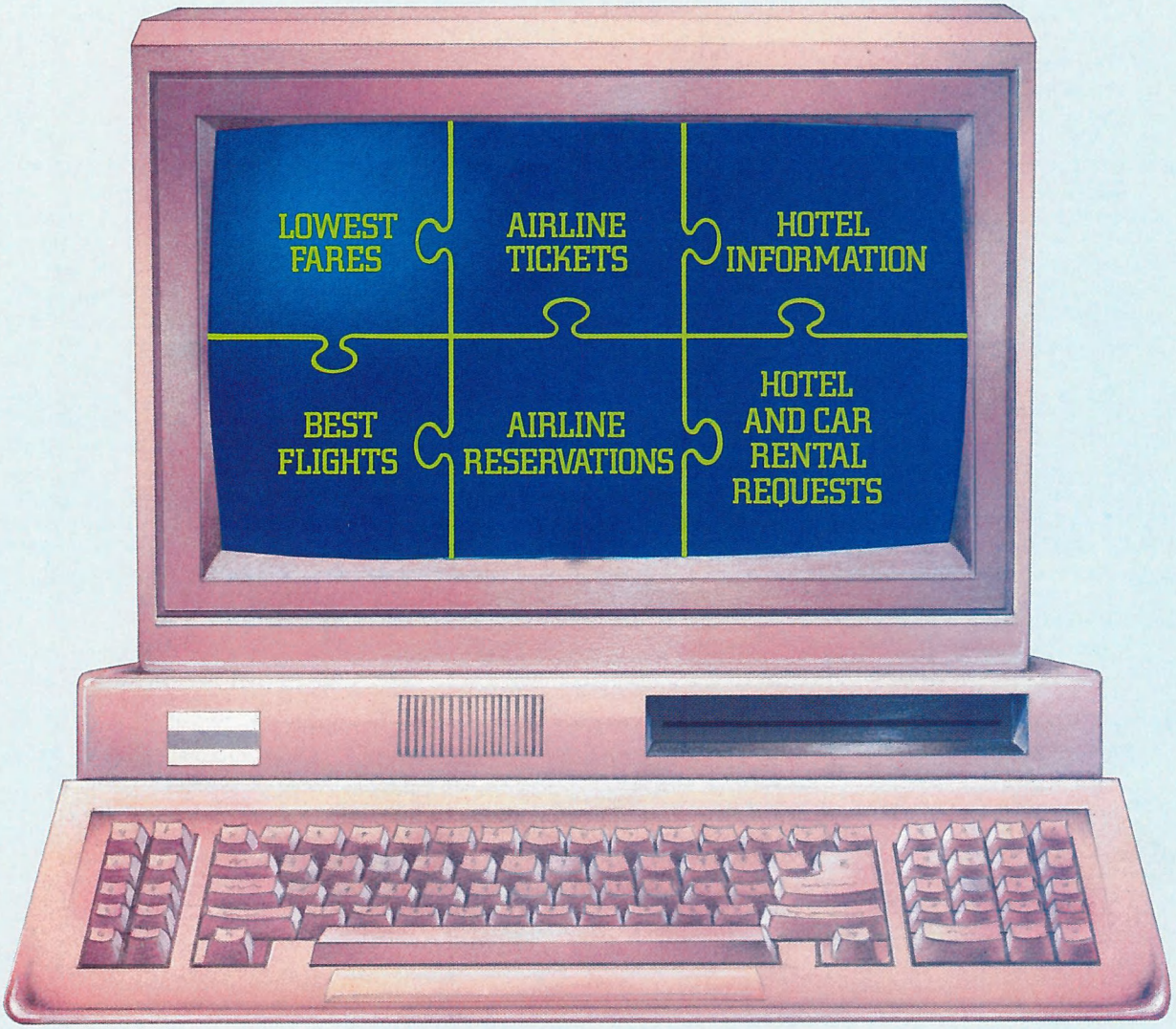

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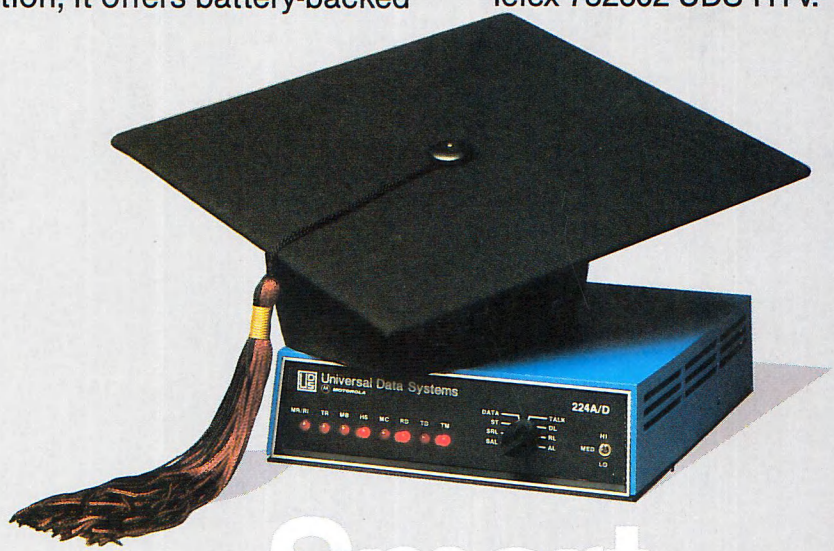

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